UNITED STATES PATENT APPLICATION FOR:

PEPTIDE MUTANT OF HUMAN ERAB OR HADH2, ITS X-RAY CRYSTAL STRUCTURE, AND MATERIALS AND METHOD FOR IDENTIFICATION OF INHIBITORS THEREOF

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CROSS REFERENCES OF RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Application, Serial No. 60/226123, filed August 18, 2000.

TECHNICAL FIELD OF THE INVENTION

The present invention relates to the three-dimensional crystal structure of human ERAB or HADH2 with NAD^+ cofactor and its use in the design and development of inhibitors thereof.

BACKGROUND OF THE INVENTION

Endoplasmic reticulum-associated amyloid β-peptide-binding protein (ERAB), a member of the short-chain dehydrogenase/reductase (SDR) family of enzymes, has been implicated in the development of Alzheimer's disease (AD). As the name suggests, ERAB, also known as L-3-hydroxyacyl-CoA dehydrogenase Type II (HADH2), is a dehydrogenase enzyme capable of binding amyloid-β (Aβ) peptide. Inhibition of ERAB or HADH2 finds therapeutic utility in the treatment of AD and research and diagnostic utility in the delineation of the role of the enzyme in both normal cellular function and in AD pathogenesis.

AD is a progressive neurodegenerative disease of the brain resulting in diminished cognitive abilities, dementia, and ultimately death. A strong link has been established between the development of AD and the accumulation of Aβ in the brain [Storey et al., *Neuropathology And Applied Neurobiology*, Vol. 25, pp. 81-97 (1999); Selkoe, *Annual Review of Neuroscience*, Vol. 17, pp. 489-517 (1994); Small et al., *J. Neurochemistry*, Vol. 73, pp. 443-9 (1999)]. Aβ is a proteolytic fragment of the integral membrane glycoprotein, amyloid-β precursor protein (APP) [Kang et al., *Nature*, Vol. 325, pp. 733-736 (1987)]. Aβ is also the principal component of the extracellular plaques that are diagnostic of AD and species of the peptide have been shown to be engaged by intracellular targets [Yan et al., *Nature*, Vol. 389, pp. 689-95 (1997)]. Although aggregated Aβ appears to be toxic to neuronal cells in culture, the mechanisms of Aβ neurotoxicity *in vivo* are not completely understood.

Aβ accumulates both inside and outside nerve cells [Wilson et al., *Journal of Neuropathology And Experimental Neurology*, Vol. 58, pp. 787-94 (1999)]. There is evidence that the interaction of Aβ with intracellular proteins could lead to cytotoxic events prior to the formation of extracellular plaques. ERAB or HADH2, an intracellular protein, has been found to bind Aβ in the yeast two-hybrid system [Yan et al., *Nature*, Vol. 389, pp. 689-95 (1997)]. HADH2, a protein identical to ERAB, has been independently identified as an L-3-hydroxyacyl-CoA dehydrogenase with an apparent role in the mitochondrial fatty acid β-oxidation pathway [He et al., *Journal of Biochemistry*, Vol. 273. No. 17, pp. 10741-10746 (1998)].

ERAB or HADH2 is reported to be an NAD^+ dependent dehydrogenase which catalyzes the reversible oxidation of L-3-hydroxyacyl-CoA. The human short chain L-3-hydroxyacyl-CoA dehydrogenase gene is organized into six exons and five introns and maps to chromosone Xp11.2 [He et al. (1998), *supra*]. Sequence comparisons show that ERAB or HADH2 belongs to the SDR family of enzymes.

ERAB or HADH2 has been cloned, expressed, purified, and characterized from human brain [He et al. (1998), *supra*]. ERAB or HADH2 messenger RNA (mRNA) is expressed ubiquitously in normal human tissues. Its expression is highest in liver and heart but ERAB or HADH2 mRNA is also expressed in normal brain. In normal brain, ERAB or HADH2 antigen is present at low levels, being predominantly localized in neurons. However, in neurons affected in AD, ERAB or HADH2 is reported to be overexpressed relative to non-AD age-matched controls, especially near deposits of Aβ [Yan et al., *Nature*, Vol. 389, pp. 689-95 (1997); USP 6,268,479].

A variety of experimental evidence suggests that ERAB or HADH2 interacts with the Aβ peptide and can mediate its cytotoxic effects [Yan et al. (1997), *supra*]. For example, ERAB or HADH2, normally found in the endoplasmic reticulum and mitochondria, has been shown to become redistributed to the plasma membrane fraction of cells in the presence of Aβ peptide [Yan et al.(1997), *supra*]. Likewise, it has been shown that the cytotoxic effects of Aβ on neuroblastoma cells in cultures, can be blocked by anti-ERAB or HADH2 antibodies. Cells which overexpress ERAB or HADH2 and Aβ show elevated markers of cytotoxicity and cell stress compared to mock transfected controls; conversely, cells overexpressing catalytically inactive mutants of ERAB or HADH2 were no more sensitive than controls which overexpressed Aβ alone [Yan et al., *Journal of Biochemistry*, Vol. 274, pp. 2145-56 (1999)].

These observations support the theory that ERAB or HADH2 mediates the intraneuronal toxicity of Aβ by acting on inappropriate substrates, possibly generating toxic aldehydes [Yan et al., *Journal of Biochemistry*, Vol. 274, pp. 2145-56 (1999)]. It has also been suggested that ERAB or HADH2 could contribute to Aβ-associated pathogenesis of AD by reducing neuroprotective estrogen levels in the brain, based on the finding that the enzyme can also utilize estrogen as a substrate [Yan et al., *Journal of Biochemistry*, Vol. 274, pp. 2145-56 (1999); He et al., *Journal of Biochemistry*, Vol. 274, pp. 15014-9 (1999)]. Although the two proposed roles for ERAB or HADH2 in AD are quite distinct, enzymatic activity of the protein is a prerequisite in either case.

Several attempts have been made to elucidate the three-dimensional structure of proteins to design candidate drugs. For example, Davis *et al.,* Prevention of Chemotherapy-Induced Alopecia in Rats by CDK Inhibitors (2001) *Science* 291:134-137; Zhu et al., Structural Analysis of the Lymphocyte-Specific Kinase Lck in Complex with Non-selective and Src Family selective Kinase Inhibitors (1999) *Structure* 7: 651-661; and Ymaguchi et al., Structural Basis for Activation of Human Lymphocyte Kinase Lck Upon Tyrosine Phosphorylation (1996) *Nature* 384: 484-489. U.S. Patent Nos. 5,322,933, 5,556,778, 5,616,555, 5,872,011 and 6,020,162 disclose the three-dimensional structure of proteins, protein-ligand complex, or enzyme-cofactor complex.

SUMMARY OF THE INVENTION

The present invention relates to an isolated, purified polynucleotide that encodes a mutant ERAB or HADH2 peptide, wherein the mutant peptide is engineered to avoid cysteine oxidation. It further relates to an isolated, purified polypeptide comprising a mutant ERAB or HADH2 peptide, which is engineered to avoid cysteine oxidation. According to one embodiment, the polypeptide has an amino acid other than cysteine at one or all of positions 5, 58, and/or 214 of SEQ ID NO: 2, and particularly the polypeptide has an amino acid sequence selected from the group consisting of SEQ ID NO: 2, SEQ ID NO: 4, SEQ ID NO: 6, SEQ ID NO: 20, and SEQ ID NO: 23 and functional variants thereof.

The present invention further relates to a crystalline mutant ERAB or HADH2 peptide. For one embodiment of the invention, the crystalline peptide diffracts x-rays at a reolution value of ≤ 3 Å, and preferably ≤ 2 Å.

The present invention further relates to a crystal of a mutant ERAB or HADH2 peptide:ligand:NAD^+ complex comprising a mutant ERAB or HADH2 peptide:ligand:NAD^+.

The present invention still further relates to a mutant ERAB or HADH2 peptide comprising a fold, wherein the fold comprises: a core β-sheet of seven strands sandwiched between two sets of three α-helices; and first and second insert domains, relative to other members of the short-chain dehydrogenase/reductase (SDR) family, the first insert domain forming a β hairpin that extends the surface of the ERAB or HADH2 peptide on one side of a substrate-binding cleft, and the second insert domain extending a loop between an α-helix comprising residues 123-136 and a β-sheet comprising residues 148-153 of SEQ ID NO: 2.

The present invention relates to an expression vector comprising a ploynucleotide that encodes a mutant ERAB or HADH2 peptide; transcriptional regulatory sequences functional in the host cell operably linked to the polynucleotide; and a selectable marker, as well as to a host cell stably transfected and transformed with such polynucleotide.

The present invention further relates to a method for identifying a candidate compound for its ability to interact with the human ERAB or HADH2 peptide comprising:

(a) expressing an isolated polynucleotide sequence which encodes a mutant ERAB or HADH2 peptide in a host cell capable of producing the peptide;

(b) exposing the mutant ERAB or HADH2 peptide to the candidate compound; and

(c) evaluating the interaction of the mutant ERAB or HADH2 peptide with the candidate compound.

The present invention further relates to a process of drug design for compounds which interact with ERAB or HADH2 comprising:

(a) crystallizing a mutant ERAB or HADH2 peptide;

(b) resolving the x-ray crystallography of the peptide;

(c) applying the data generated from resolving the x-ray crystallography of the peptide to a computer algorithm which generates a model of the peptide suitable for use in designing molecules that will act as agonists or antagonists to the peptide; and

(d) applying an interative process whereby various molecular structures are applied to the computer-generated model to identify potential agonists or antagonists of the peptide.

The present invention also relates to a method of assessing compounds which are agonists or antagonists of the activity of the human ERAB or HADH2 enzyme comprising:

(a) crystallizing a mutant ERAB or HADH2 peptide; obtaining crystallography coordinates for the crystallized peptide;

(b) applying the crystallography coordinates for the peptide to a computer algorithm such that the algorithm generates a model of the peptide, the model suitable for use in designing molecules that will act as agonists or antagonists to the peptide; and

(c) applying an iterative process whereby various molecular structures are applied to the computer-generated model to identify potential agonists or antagonists to the peptide.

The invention further relates to a method of identifying a compound that associates with ERAB or HADH2 comprising the step of using the structure coordinates of Table II to computationally analyze a molecular structure to evaluate a chemical compound for associating with the substrate-binding site of ERAB or HADH2 and identifying those chemical entities that associate with the substrate-binding site, wherein the step of computationally analyzing the molecular sturucture comprises:

(a) using a machine readable data storage medium comprising a data storage material encoded with machine readable data wherein the data comprises crystal coordinates of mutant ERAB or HADH2 peptide molecule or complex of the peptide;

(b) employing a working memory for string instructions for processing the machine readable data,

(c) using a central processor unit (CPU) coupled to the working memory and the machine readable data for performing a Fourier transformation of the machine readable data and for processing such data into crystal coordinates of three-dimensional molecule or complex of the peptide, and

(d) displaying a display coupled to the CPU for displaying the crystal corrinates of the three-dimensional moleculer or complex.

Other aspects, features, and advantages of the invention will be become apparent upon consideration of the detailed description below in conjuction with the appended figures.

BRIEF DESCRIPTION OF THE DRAWINGS

The file of this patent contains at least one drawing executed in color. Copies of this patent with color drawing(s) will be provided by the Patent and Trademark Office upon request and payment of the necessary fee.

Figures 1A and 1B depict the three-dimensional structure of the ERAB or HADH2 monomer. Figure 1A shows the stereo Cα trace of the ERAB or HADH2 monomer. Every tenth residue is numbered. The bound NAD-inhibitor adduct is also shown. Figure 1B is a ribbon diagram of the ERAB or HADH2 monomer, with the NAD-inhibitor adduct shown in ball-and-

stick representation. The ribbon is white at the amino terminus and becomes darker blue moving toward the carboxy terminus. Alpha-carbon positions of residues in the insertion regions of ERAB or HADH2 are shown as yellow spheres.

Figure 2 shows the sequence alignment of wild-type ERAB or HADH2 and representative members of the SDR family. The wild-type ERAB or HADH2 sequence is aligned with five related members of the SDR family: *E. coli* 7α-hydroxysteroid dehydrogenase (7α-HSD), *Streptomyces hydrogenans* 3α-20β-hydroxysteroid dehydrogenase (3α-20β-HSD), human 17β-hydrodroxysteroid dehydrogenase (17β-HSD), human 15-hydroxyprostaglandin dehydrogenase (15-PGD; P15428) (Ensor et al., *Journal of Biochemistry*, Vol. 265, pp.14888-91 (1990)) and a human protein of unknown function, GenBank accession number CAA20237.1. 7α-HSD (1fmc) and 3α-20β-HSD (1hdc) are two proteins with known structures that are closely related to ERAB or HADH2; 17β-HSD (1fdt) is a similar human protein of known structure. A gapped sequence alignment for comparison is derived using Gapped BLAST [Altschul et al., *Nucleic Acids Research,* Vol. 25, pp. 3389-3402 (1997)] to search NCBI's GenBank database. Results indicate that 15-PGD is a human protein sequence similar to ERAB or HADH2; CAA20237.1 is a human nucleotide sequence that is similar when translated to its corresponding protein sequence. The alignment of ERAB or HADH2 to 17β-HSD, 7α-HSD, and 3α-20β-HSD was derived from a structural superposition using the tools in Insight II [available through Molecular Simulations Inc. (1999)] coupled with visual inspection. The sequences of 15-PGD and translated CAA20237.1 were aligned to the resulting profile using CLUSTALW [Thompson et al., *Nucleic Acids Research*, Vol. 22, pp. 4673-4680 (1994)]. Every tenth residue in ERAB or HADH2 is labeled. The secondary structure elements of ERAB or HADH2, as identified by PROCHECK (Laskowski et al., *Journal of Applied Crystallography,* Vol. 26, pp. 283-291 (1993)), are underlined and labeled above the sequences. Residues that are identical (•) or similar (○) in all six proteins are marked beneath the sequences. The first six residues of ERAB or HADH2, which are disordered in the crystal structure, are not shown. The final 53 residues of 17β-HSD are also not shown.

Figure 3 is a ribbon representation of the ERAB or HADH2 tetramer. The tetramer is viewed down one of three mutually perpendicular two-fold axes. Individual monomers are shown in red, green, blue and yellow. The bound NAD^+ and NAD-inhibitor adduct molecules are shown in ball-and-stick representation.

Figure 4A shows the structural formula and binding enantiomer of Compound I. Figure 4B is a stereoview of the electron density for the NAD-Compound I adduct. Figure 4C depicts the proposed reaction scheme occurring between the NAD^+ and Compound I. Figure 4D is a schematic LIGPLOT (Wallace et al., *Protein England* Vol. 8, pp. 127 –134 (1995)) view of

ERAB or HADH2-Compound I interactions. Compound I, the C4N atom (see Table III) of NAD^+, and the enzyme side-chains that form hydrogen bonds to the ligand are shown in ball-and-stick representation.

Figure 5 is a plot of integrated-binding data obtained for a calorimetric titration of wild-type ERAB or HADH2 into Compound I in the presence and absence of cofactor. Wild-type ERAB or HADH2 (415 μM) was titrated into 20 μM inhibitor in the presence and absence of 20 μM cofactor at 15°C. The closed symbols represent the integrated-data points for 10 μL injections of ERAB or HADH2 into inhibitor in the absence of cofactor (♦); in the presence of NAD^+ (●); and in the presence of NADH (■). The open symbols represent the integrated data points for the corresponding control titrations of ERAB or HADH2 into buffer (Δ); in the presence of NAD^+ (○); and in the presence of NADH (□). Lines connecting the data points have been added for visual clarity.

SEQUENCE LISTINGS

SEQ ID NO. 1 – Full-length mutant ERAB or HADH2 C214R (nucleotide sequence - 786 base pairs)

SEQ ID NO. 2 – Full-length mutant ERAB or HADH2 C214R (peptide sequence – 261 AA)

SEQ ID NO. 3 – Full-length mutant ERAB or HADH2 C5V (nucleotide sequence – 786 base pairs)

SEQ ID NO. 4 – Full-length mutant ERAB or HADH2 C5V (peptide sequence – 261 AA)

SEQ ID NO. 5 – Full-length mutant ERAB or HADH2 C58V (nucleotide sequence – 786 base pairs)

SEQ ID NO. 6 – Full-length mutant ERAB or HADH2 C58V (peptide sequence – 261 AA)

SEQ ID NO. 7 – DNA sequence of wild-type ERAB or HADH2 (nucleotide sequence – 786 base pairs)

SEQ ID NO. 8 – Peptide sequence of wild-type ERAB or HADH2 (peptide sequence – 261 AA)

SEQ ID NO. 9 – PCR primer

SEQ ID NO. 10 – PCR primer

SEQ ID NO. 11 – Oligonucleotide for C5V

SEQ ID NO. 12 – Oligonucleotide for C58V

SEQ ID NO. 13 – Oligonucleotide for C214R

SEQ ID NO. 14 – Peptide sequence of 7α –HDS

SEQ ID NO. 15 – Peptide sequence of 3α20β –HDS

SEQ ID NO. 16 – Peptide sequence of 17β-HDS

SEQ ID NO. 17 – Peptide sequence of CAA20237.1

SEQ ID NO. 18 – Peptide sequence of 15- PGD

SEQ ID NO. 19 – Full-length mutant ERAB or HADH2 C214A (nucleotide sequence – 786 base pairs)

SEQ ID NO. 20 – Full-length mutant ERAB or HADH2 C214A (peptide sequence – 261 AA)

SEQ ID NO. 21 – Oligonucleotide for ERAB or HADH2 C214A

SEQ ID NO. 22 – Full-length mutant ERAB or HADH2 C214S (nucleotide sequence – 786 base pairs)

SEQ ID NO. 23 – Full-length mutant ERAB or HADH2 C214S (peptide sequence – 261 AA)

SEQ ID NO. 24 – Oligonucleotide for ERAB or HADH2 C214S

DETAILED DESCRIPTION OF THE INVENTION

ERAB or HADH2 is a member of the short-chain dehydrogenase/reductase (SDR) family of enzymes. We have facilitated overexpression of several mutants of the enzyme in *E. coli*. The mutants having advantageous physical characteristics as compared to the wild-type ERAB or HADH2. The mutant ERAB or HADH2 peptides of the present invention have sufficient activity, stability and solubility so as to allow for peptide crystallization and subsequent x-ray crystallography characterization. Such properties facilitate the resolution of the three-dimensional crystal structure of human ERAB or HADH2 as well as the characterization of several structural features of ERAB or HADH2 responsible for interactions associated with high-affinity binding of substrates to ERAB or HADH2. Such interactions include the formation of a covalent linkage between the bound substrate and the NAD^+ cofactor.

We have determined the crystal structure of human ERAB or HADH2 with NAD^+ and an inhibitory small molecule bound thereto. The inhibitor occupies the substrate-binding site and forms a covalent adduct with the NAD^+ cofactor. The crystal structure provides a basis for the design of ERAB or HADH2 inhibitors with potential application in the treatment of Alzheimer's disease. Crystals of ERAB or HADH2 with bound NAD^+ and Compound I were obtained using the C214R mutant of the enzyme. This mutant was produced to avoid potential problems with cysteine oxidation in the protein, with arginine selected as the replacement amino acid because of its occurrence at this position in other mammalian ERAB or HADH2 sequences [He et al. (1998), *supra*]. Enzymatic activity of the C214R mutant protein is comparable to that of the wild-type protein. The crystal structure of the ERAB or HADH2:NAD^+:Compound I complex was determined at 2.0 Å using molecular replacement techniques. The search model for molecular replacement was our 1.9 Å resolution structure of the mutant ERAB or HADH2:NAD^+

complex. The structure was refined to an R factor of 0.215 for all data to 2.0 Å resolution. Data collection, structure determination, and refinement statistics are summarized in Table I. The resolution of the ERAB or HADH2 crystal structure allows for efficient design and development of inhibitors or modulators of human ERAB or HADH2. Inhibition of ERAB or HADH2 finds therapeutic utility in the treatment of AD. In addition to any therapeutic application, ERAB or HADH2 inhibitors can facilitate the delineation of the role of the enzyme in both normal cellular function and in Aβ pathogenesis.

The invention encompasses both the mutant peptides *per se* and salts thereof. The peptide may be synthetically or naturally produced. The invention further relates to an isolated, purified polynucleotide which encodes an enzymatically active peptide mutant of ERAB or HADH2 in the active conformation. The polynucleotide may be natural or recombinant.

The invention provides an expression vector for producing an enzymatically active mutant of human ERAB or HADH2 peptide in a host cell. The invention further relates to a host cell stably transformed and transfected with a polynucleotide encoding an enzymatically active peptide mutant of ERAB or HADH2, or fragment thereof, or an active functional analog thereof, in a manner allowing the expression of the enzymatically active peptide mutant of ERAB or HADH2 in the active conformation.

According to the present invention, an inhibitor (Compound I) of ERAB or HADH2 and the crystal structure of the ERAB or HADH2:NAD^+:inhibitor complex are provided. The availability of a potent specific inhibitor of ERAB or HADH2 can facilitate the detailed analysis of the role of this enzyme in AD pathogenesis and may ultimately provide a new therapeutic approach for treatment of the disease. The crystal structure of the enzyme:inhibitor:cofactor complex provides a basis for the design of additional inhibitors and for elucidating the nature of the interactions between ERAB or HADH2 and the amyloid-β peptide.

The molecular structure of the x-ray crystallography data may be used to model the binding of candidate compounds in order to screen candidate compounds. In accordance with the invention, there is also provided several structural features unique to ERAB or HADH2 as compared to other members of the short-chain dehydrogenase/reductase (SDR) family. Some of these features are responsible for the high-affinity binding of an inhibitor compound to the ERAB or HADH2 substrate-binding site, including the formation of a covalent linkage between inhibitor and the NAD^+ cofactor.

Potential inhibitors or modulators of the human ERAB or HADH2 may be identified according to the method of the present invention. Potential therapeutic compounds for the treatment of various disease conditions associated with the ERAB or HADH2, for example neurodegenerative diseases and cancers may be designed and screened according to the present invention. In the designing and screening processes, the DNA sequence or variants thereof encoding the mutant ERAB or HADH2 peptide is expressed, and may be assayed for interaction of the enzyme with the candidate compound by exposing the enzyme to the candidate compound and evaluating the interaction of the enzyme with the candidate compound. The designing and synthesis as well as screening may be automated, for example, utilizing robotic techniques.

Three-dimensional molecular structure of ERAB or HADH2 of the present invention may be used to model the binding of candiatate compounds to the ERAB or HADH2 binding site, facilitating screening candidate compounds. The x-ray crystallographic coordinates disclosed herein, allow for the generation of three-dimentsional models of the catalytic region and binding site of the human ERAB or HADH2. Design of inhibitors generally involves the generation of molecules via the use of computer programs, which build and link fragments or atoms into a site based upon steric and electrostatic complementary, without reference to substrate analog structures. The drug design process begins after the structure of the target (human ERAB or HADH2) is solved to at least a resolution of 3 Å, more preferably 2.5 Å, even more preferably 2 Å. Refinement of the structure to a resolution of 2 Å or better with fixed water molecules in place provides more optimal conditions to undertake drug design.

In one preferred embodiment, the method of screening utilized the steps of (a) computer-generating a virtual-binding cavity, the binding cavity defined by the binding sites; (b) computer-generating a compound structure that spatially conforms to the binding cavity; and (c) testing to see whether said compound binds to at least one of the stated-binding sites.

The invention also has utility in the iterative drug design process. The process screens potential inhibitors or modulators of the ERAB or HADH2 enzyme by determining their ability to bind to and inhibit or modulate the ERAB or HADH2. The x-ray crystallographic coordinates disclosed herein allow advantageously generation of three-dimensional models of the enzymatically active site and the drug-binding site of the ERAB or HADH2 protein. *De novo* design comprises of the generation of molecules via the use of computer programs which build and link fragments or atoms into a site based upon steric and electrostatic complementarily, without reference to substrate analog structures. The determination of the structure of the target (human ERAB or HADH2) is solved to at least a resolution of 3 Å, more preferably 2.5 Å, even more preferably 2 Å. Refinement of the structure to a resolution of 2 Å or better with fixed water molecules in place provides more optimal conditions to undertake drug design.

In one preferred embodiment, the method for identifying potential inhibitors utilizes the steps of (a) designing a poteintial inhibitor or modulator for ERAB or HADH2 that will interact with amino acids in the ERAB or HADH2 substrate-binding site based on the crystal coordinates of the mutant ERAB or HADH2 peptide:ligand:NAD^+ complex set forth in Table II; and (b) synthesizing the potential inhibitor or modulator and assaying it to determine whether it inhibits or modulates the activity of ERAB or HADH2.

Rapidly screening methods to assay those compounds that inhibit or modulate the ERAB or HADH2 enzyme or core structure for further ERAB or HADH2 inhibitor design may be used. The high throughput-screening assay is capable of being fully automated on robotic workstations. The assay may employ radioactivity or other materials useful for detection.

A computer processor may be used for analyzing a molecular structure comprising by using a machine-readable data storage medium comprising a data storage material encoded with machine-readable data. The data comprises crystal coordinates of mutant ERAB or HADH2 peptide molecule or its molecular complex. In this method, a CPU coupled to a working memory and the machine readable data may be used to perform a Fourier transformation of the machine readable data and to process such data into crystal coordinates of three-dimensional molecule or complex of said peptide. The x-ray coordinate data may be processed into three-dimensional graphical display using a computer-based method. The machine-readable data storage medium may include CD-ROM, magneto-optic disk, or other storage media.

The terms as used herein are explained below. Also, as used herein, the terms "comprising" and "including" are used in the conventional, non-limiting sense.

A. Peptides, Proteins and Antibodies

The present invention provides isolated peptide and protein molecules that consist of, consist essentially of or are comprised of the amino acid sequences of the mutant peptides encoded by the nucleic acid sequences disclosed in the SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 19 and SEQ ID NO: 22 as well as all obvious variants of these peptides that the within the art to make and use. Some of these variants are described in detail below.

The invention also includes a modified, enzymatically active ERAB or HADH2 peptide comprising a fold, wherein said fold comprises: a core β-sheet of seven strands sandwiched between two sets of three α-helices; and first and second insert domains, relative to other

members of the SDR family, the first insert domain forming a β hairpin that extends the surface of said ERAB or HADH2 peptide on one side of a substrate-binding cleft, and the second insert domain extending a loop between an α-helix comprising residues 123-136 and a β-sheet comprising residues 148-153 of SEQ ID NO: 2. The invention provides a peptide having an amino acid sequence comprising amino acids 90 to 261 of SEQ ID NO. 2 or an active or functional variant thereof.

As used herein, a peptide is said to be "isolated" or "purified" when it is substantially free of homologous cellular material or free of chemical precursors or other chemicals. The peptides of the present invention can be purified to homogeneity or other degrees of purity. The level of purification will be based on the intended use. The critical feature is that the preparation allows for the desired function of the peptide, even if in the presence of considerable amounts of other components.

In some uses, "substantially free of cellular material" includes preparations of the peptide having less than 30% (by dry weight) other proteins (i.e., contaminating protein), preferably less than 20% other proteins, more preferably less than 10% other proteins, or most preferably less than 5% other proteins. When the peptide is recombinantly produced, it can also be substantially free of culture medium, i.e., culture medium represents less than 20% of the volume of the protein preparation.

The language "substantially free of chemical precursors or other chemicals" includes preparations of the peptide in which it is separated from chemical precursors or other chemicals that are involved in its synthesis. In one embodiment, the language "substantially free of chemical precursors or other chemicals" includes preparations of the mutant peptide having less than 30% (by dry weight) chemical precursors or other chemicals, preferably less than 20% chemical precursors or other chemicals, more preferably less than 10% chemical precursors or other chemicals, or most preferably less than 5% chemical precursors or other chemicals.

The isolated mutant peptide described herein can be purified from cells that naturally express it, purified from cells that have been altered to express it (recombination), or synthesized using known protein synthesis methods. For example, a nucleic acid molecule encoding the mutant peptide is cloned into an expression vector, the expression vector introduced into a host cell and the peptide expressed in the host cell. The peptide can then be isolated from the cells by an appropriate purification scheme using standard peptide/protein purification techniques. Many of these techniques are described in detail below.

As mentioned above, the present invention also provides and enables obvious variants of the amino acid sequence of the peptides of the present invention, such as naturally occurring mature forms of the peptides, allelic/sequence variants of the peptides, non-naturally occurring recombinantly derived variants of the peptides, and orthologs and paralogs of the peptides. Such variants can be generated using techniques that are known by those skilled in the fields of recombinant nucleic acid technology and protein biochemistry.

Such variants can readily be identified/made using molecular techniques and the sequence information disclosed herein. Further, such variants can readily be distinguished from other peptides based on sequence and/or structural homology to the peptides of the present invention. The degree of homology/identity present will be based primarily on whether the peptide is a functional variant or non-functional variant, the amount of divergence present in the paralog family and the evolutionary distance between the orthologs.

To determine the percent identity of two amino acid sequences or two nucleic acid sequences, the sequences are aligned for optimal comparison purposes (e.g., gaps can be introduced in one or both of a first and a second amino acid or nucleic acid sequence for optimal alignment and non-homologous sequences can be disregarded for comparison purposes). The length of a reference sequence aligned for comparison purposes is at least 30%, preferably 40%, more preferably 50%, even more preferably 60% or more of the length of the reference sequence. In a preferred embodiement, the length of a reference sequence aligned for comparison purposes is at least 70%, preferably 80%, more preferably 90% or more of the length of the reference sequence. The amino acid residues or nucleotides at corresponding amino acid positions or nucleotide positions are then compared. When a position in the first sequence is occupied by the same amino acid residue or nucleotide as the corresponding position in the second sequence, then the molecules are identical at that position (as used herein amino acid or nucleic acid 'identity' is equivalent to amino acid or nucleic acid 'homology'). The percent identity between the two sequences is a function of the number of identical positions shared by the sequences, taking into account the number of gaps, and the length of each gap, which need to be introduced for optimal alignment of the two sequences.

The comparison of sequences and determination of percent identity and similarity between two sequences can be accomplished using a mathematical algorithm. (See, e.g., *Computational Molecular Biology*, Lesk, A.M., ed., Oxford University Press, New York, 1988; *Biocomputing: Informatics and Genome Projects*, Smith, D.W., ed., Academic Press, New York, 1993; *Computer Analysis of Sequence Data, Part 1*, Griffin, A.M., and Griffin, H.G., eds.,

Humana Press, New Jersey, 1994; *Sequence Analysis in Molecular Biology*, von Heinje, G., Academic Press, 1987; and *Sequence Analysis Primer*, Gribskov, M. and Devereux, J., eds., M Stockton Press, New York, 1991). In a preferred embodiment, the percent identity between two amino acid sequences is determined using the Needleman and Wunsch (*J. Mol. Biol.* (48):444-453 (1970)) algorithm which has been incorporated into commercially available computer programs, such as GAP in the GCG software package, using either a Blossom 62 matrix or a PAM250 matrix, and a gap weight of 16, 14, 12, 10, 8, 6, or 4 and a length weight of 1, 2, 3, 4, 5, or 6. In yet another preferred embodiment, the percent identity between two nucleotide sequences can be determined using the commercially available computer programs including the GAP program in the GCG software package (Devereux, J., et al., *Nucleic Acids Res. 12(1)*:387 (1984)), the NWS gap DNA CMP matrix and a gap weight of 40, 50, 60, 70, or 80 and a length weight of 1, 2, 3, 4, 5, or 6. In another embodiment, the percent identity between two amino acid or nucleotide sequences is determined using the algorithm of E. Meyers and W. Miller (CABIOS, 4:11-17 (1989)) which has been incorporated into commercially available computer programs, such as ALIGN (version 2.0), using a PAM120 weight residue table, a gap length penalty of 12 and a gap penalty of 4.

The nucleic acid and protein sequences of the present invention can further be used as a "query sequence" to perform a search against sequence databases to, for example, identify other family members or related sequences. Such searches can be performed using commercially available search engines, such as the NBLAST and XBLAST programs (version 2.0) of Altschul, et al. (*J. Mol. Biol.* 215:403-10 (1990)). BLAST nucleotide searches can be performed with the NBLAST program, score = 100, wordlength = 12 to obtain nucleotide sequences homologous to the nucleic acid molecules of the invention. BLAST protein searches can be performed with the XBLAST program, score = 50, wordlength = 3 to obtain amino acid sequences homologous to the proteins of the invention. To obtain gapped alignments for comparison purposes, Gapped BLAST can be utilized as described in Altschul et al. (*Nucleic Acids Res.* 25(17):3389-3402 (1997)). When utilizing BLAST programs, the default parameters of the respective programs (e.g., XBLAST and NBLAST) can be used.

Full-length clones comprising one of the peptides of the present invention can readily be identified as having complete sequence identity to one of the mutant peptides of human ERAB or HADH2 of the present invention as well as being encoded by the same genetic locus as the mutant peptide provided herein.

Allelic variants of a peptide can readily be identified as having a high degree (significant) of sequence homology/identity to at least a portion of the peptide as well as being encoded by the same genetic locus as the mutant peptide provided herein. As used herein, two proteins (or a region of the proteins) have significant homology when the amino acid sequences are typically at least 70%, preferably 75%, more preferably 80% or 85%, and typically at least 90%, more preferably 95% or more homologous. A significantly homologous amino acid sequence, according to the present invention, will be encoded by a nucleic acid sequence that will hybridize to a peptide encoding nucleic acid molecule under stringent conditions as described below.

Paralogs of a peptide can readily be identified as having some degree of significant sequence homology/identity to at least a portion of the mutant peptide as well as being encoded by a gene from human, and as having similar activity or function. Two proteins will typically be considered paralogs when the amino acid sequences are typically at least 70%, preferably 80%, more preferably at least 90%, most preferably 95% or more homologous through a given region or domain. Such paralogs will be encoded by a nucleic acid sequence that will hybridize to a mutant peptide encoding nucleic acid molecule under stringent conditions as described in the section "B. Nucleic Acids and Polynucleotides" below.

Orthologs of a mutant peptide can readily be identified as having some degree of significant sequence homology/identity to at least a portion of the mutant peptide as well as being encoded by a gene from another organism. Preferred orthologs will be isolated from mammals other than human, for the development of human therapeutic targets and agents, or other invertebrates, particularly insects of economical/agriculture importance, e.g. members of the Lepidopteran and Coleopteran orders, for the development of insecticides and insecticidal targets. Such orthologs will be encoded by a nucleic acid sequence that will hybridize to a mutant peptide encoding nucleic acid molecule under moderate to highly stringent conditions, as more fully described below, depending on the degree of relatedness of the two organisms yielding the proteins.

Non-naturally occurring variants of the mutant peptides of the present invention can readily be generated using recombinant techniques. Such variants include, but are not limited to deletions, additions and substitutions in the amino acid sequence of the mutant peptide. For example, one class of substitutions involves conserved amino acid changes. Such substitutions are those that substitute a given amino acid in a peptide by another amino acid of like characteristics. Typically seen as conservative substitutions are the replacements, one for another, among the aliphatic amino acids Ala, Val, Leu, and Ile; interchange of the hydroxyl residues Ser and Thr; exchange of the acidic residues Asp and Glu; substitution between the

amide residues Asn and Gln; exchange of the basic residues Lys and Arg; and replacements among the aromatic residues Phe, Tyr. Guidance concerning which amino acid changes are likely to be phenotypically silent are found in Bowie et al., *Science 247*:1306-1310 (1990).

Variants of the mutant peptide can be fully functional or can lack function in one or more activities. Fully functional variants typically contain only conservative variation or variation in non-critical residues or in non-critical regions. Functional variants can also contain substitution of similar amino acids, which result in no change or an insignificant change in function. Alternatively, such substitutions may positively or negatively affect function to some degree.

Non-functional variants typically contain one or more non-conservative amino acid substitutions, deletions, insertions, inversions, or truncation or a substitution, insertion, inversion, or deletion in a critical residue or critical region.

Amino acids that are essential for function can be identified by methods known in the art, such as site-directed mutagenesis or alanine-scanning mutagenesis (Cunningham et al., *Science 244*:1081-1085 (1989)). The latter procedure introduces single alanine mutations at every residue in the molecule. The resulting mutant molecules are then tested for biological activity such as receptor binding or *in vitro* proliferative activity. Sites that are critical for binding can also be determined by structural analysis such as x-ray crystallography, nuclear magnetic resonance or photoaffinity labeling (Smith et al., *J. Mol. Biol. 224*:899-904 (1992); de Vos et al. *Science 255*:306-312 (1992)). Accordingly, the polypeptides also encompass derivatives or analogs in which a substituted amino acid residue is not one encoded by the genetic code; in which a substituent group is included, in which the mature polypeptide is fused with another compound, such as a compound to increase the half-life of the polypeptide (for example, polyethylene glycol), or in which the additional amino acids are fused to the mature polypeptide, such as a leader or secretory sequence or a sequence for purification of the mature polypeptide or a pro-protein sequence.

"Polypeptide" refers to any peptide or protein comprising two or more amino acids joined to each other by peptide bonds or modified peptide bonds, i.e., peptide isosteres. "Polypeptide" refers to both short chains, commonly referred to as peptides, oligopeptides or oligomers, and to longer chains, generally referred to as proteins. The terms "peptide", "polypeptide" and "protein" are used interchangeably herein. Polypeptides may contain amino acids other than the 20 naturally occurring amino acids. Further, many amino acids, including the terminal amino acids, may be modified by natural processes, such as processing and other post-translational

modifications, or by chemical modification techniques well known in the art. Common modifications that occur naturally in polypeptides are described in basic texts, detailed monographs, and the research literature, and they are well known to those of skill in the art. Generally known modifications include, but are not limited to, acetylation, acylation, ADP-ribosylation, amidation, covalent attachment of flavin, covalent attachment of a heme moiety, covalent attachment of a nucleotide or nucleotide derivative, covalent attachment of a lipid or lipid derivative, covalent attachment of phosphotidylinositol, cross-linking, cyclization, disulfide bond formation, demethylation, formation of covalent crosslinks, formation of cystine, formation of pyroglutamate, formylation, gamma carboxylation, glycosylation, GPI anchor formation, hydroxylation, iodination, methylation, myristoylation, oxidation, proteolytic processing, phosphorylation, phenylation, racemization, selenoylation, sulfation, transfer-RNA mediated addition of amino acids to proteins such as arginylation, and ubiquitination. Several particularly common modifications, glycosylation, lipid attachment, sulfation, gamma-carboxylation of glutamic acid residues, hydroxylation and ADP-ribosylation, for instance, are described in most basic texts, such as Creighton, *Proteins - Structure and Molecular Properties*, 2nd Ed., W. H. Freeman and Company, New York (1993). Many reviews are available on this subject, such as Wold, *Posttranslational Covalent Modification of Proteins*, B.C. Johnson, Ed., Academic Press, New York 1-12 (1983); Seifter et al. (*Meth. Enzymol. 182*: 626-646 (1990)) and Rattan *et al.* (*Ann. N.Y. Acad. Sci. 663*:48-62 (1992)).

The present invention further provides for fragments of the mutant peptides, in addition to proteins and peptides that comprises and consist of such fragments.

As used herein, a fragment comprises at least 8 or more contiguous amino acid residues from the mutant peptide of ERAB or HADH2. Such fragments can be chosen based on the ability to retain one or more of the biological activities of the ERAB or HADH2 or could be chosen for the ability to perform a function, e.g. act as an immunogen. Particularly important fragments are biologically acitive fragments, peptides which are, for example about 8 or more amino acids in length. Such fragments will typically comprise a domain or motif of the mutant peptide, e.g., active site. Further, possible fragments include, but are not limited to, domain or motif containing fragments, soluble peptide fragments, and fragments containing immunogenic structures. Predicted domains and functional sites are readily identifiable by computer programs well-known and readily available to those of skill in the art (e.g., by PROSITE analysis).

The peptides of the present invention can be attached to heterologous sequences to form chimeric or fusion proteins. Such chimeric and fusion proteins comprise a peptide operatively

linked to a heterologous protein having an amino acid sequence not substantially homologous to the mutant peptide of ERAB or HADH2. "Operatively linked" indicates that the peptide and the heterologous protein are fused in-frame. The heterologous protein can be fused to the N-terminus or C-terminus of the mutant peptide of ERAB or HADH2. The two peptides linked in a fusion peptide are typically derived from two independent sources, and therefore a fusion peptide comprises two linked peptides not normally found linked in nature. The two peptides may be from the same or different genome.

In some uses, the fusion protein does not affect the activity of the peptide *per se*. For example, the fusion protein can include, but is not limited to, enzymatic fusion proteins, for example beta-galactosidase fusions, yeast two-hybrid GAL fusions, poly-His fusions, MYC-tagged, HI-tagged and Ig fusions. Such fusion proteins, particularly poly-His fusions, can facilitate the purification of recombinant peptide. In certain host cells (e.g., mammalian host cells), expression and/or secretion of a protein can be increased by using a heterologous signal sequence.

A chimeric or fusion protein can be produced by standard recombinant DNA techniques. For example, DNA fragments coding for the different protein sequences are ligated together in-frame in accordance with conventional techniques. In another embodiment, the fusion gene can be synthesized by conventional techniques including automated DNA synthesizers. Alternatively, PCR amplification of gene fragments can be carried out using anchor primers which give rise to complementary overhangs between two consecutive gene fragments which can subsequently be annealed and re-amplified to generate a chimeric gene sequence [see Ausubel et al., *Current Protocols in Molecular Biology* (1992)]. Moreover, many expression vectors are commercially available that already encode a fusion moiety (e.g., a GST protein). A mutant ERAB or HADH2 peptide-encoding nucleic acid can be cloned into such an expression vector such that the fusion moiety is linked in-frame to the mutant peptide.

B. Nucleic Acids and Polynucleotides

The present invention provides isolated nucleic acid molecules that encode the functional, active mutant peptides of ERAB or HADH2 of the present invention. Such nucleic acid molecules will consist of, consist essentially of, or comprise a nucleotide sequence that encodes one of the peptides of the present invention, an allelic variant thereof, or an ortholog or paralog thereof.

As used herein, an "isolated" nucleic acid molecule is one that is separated from other nucleic acid present in the natural source of the nucleic acid. Preferably, an "isolated" nucleic acid is free of sequences which naturally flank the nucleic acid (i.e., sequences located at the 5' and 3' ends of the nucleic acid) in the genomic DNA or cDNA of the organism from which the nucleic acid is derived. However, there can be some flanking nucleotide sequences, for example up to about 5KB, particularly contiguous peptide encoding sequences and peptide encoding sequences within the same gene but separated by introns in the genomic sequence. The important point is that the nucleic acid is isolated from remote and unimportant flanking sequences such that it can be subjected to the specific manipulations described herein such as recombinant expression, preparation of probes and primers, and other uses specific to the nucleic acid sequences.

Moreover, an "isolated" nucleic acid molecule, such as a cDNA molecule, can be substantially free of other cellular material, or culture medium when produced by recombinant techniques, or chemical precursors or other chemicals when chemically synthesized. However, the nucleic acid molecule can be fused to other coding or regulatory sequences and still be considered isolated.

For example, recombinant DNA molecules contained in a vector are considered isolated. Further examples of isolated DNA molecules include recombinant DNA molecules maintained in heterologous host cells or purified (partially or substantially) DNA molecules in solution. Isolated RNA molecules include *in vivo* or *in vitro* RNA transcripts of the isolated DNA molecules of the present invention. Isolated nucleic acid molecules according to the present invention further include such molecules produced synthetically.

Full-length genes may be cloned from known sequence using any one of a number of methods known in the art. For example, a method which employs XL-PCR (Perkin-Elmer, Foster City, Calif.) to amplify long pieces of DNA may be used. Other methods for obtaining full-length sequences are known in the art.

The isolated nucleic acid molecules can encode the active protein plus additional amino or carboxyl-terminal amino acids, or amino acids interior to the mature peptide (when the mature form has more than one peptide chain, for instance). Such sequences may play a role in processing of a protein from precursor to an active form, facilitate protein trafficking, prolong or shorten protein half-life or facilitate manipulation of a protein for assay or production, among other things. As generally is the case *in situ*, the additional amino acids may be processed away

from the mature protein by cellular enzymes. As mentioned above, the isolated nucleic acid molecules include, but are not limited to, the sequence encoding the active mutant peptide of ERAB or HADH2 alone or in combination with coding sequences, such as a leader or secretory sequence (e.g., a pre-pro or pro-protein sequence), the sequence encoding the active mutant peptide, with or without the additional coding sequences, plus additional non-coding sequences, for example introns and non-coding 5' and 3' sequences such as transcribed but non-translated sequences that play a role in transcription, including mRNA processing (including splicing and polyadenylation signals), ribosome binding sites and sequences important for stability of mRNA. In addition, the nucleic acid molecule may be fused to a marker sequence encoding, for example, a peptide that facilitates purification.

Isolated nucleic acid molecules can be in the form of RNA, such as mRNA, or in the form of DNA, including cDNA and genomic DNA, obtained by cloning or produced by chemical synthetic techniques or by a combination thereof. The nucleic acid, especially DNA, can be double-stranded or single-stranded. Single-stranded nucleic acid can be the coding strand (sense strand) or the non-coding strand (antisense strand).

The invention further provides nucleic acid molecules that encode fragments of the peptides of the present invention and that encode obvious variants of the peptides of the present invention that are described herein. Such nucleic acid molecules may be naturally occurring, such as allelic variants (same locus), paralogs (different locus), and orthologs (different organism), or may be constructed by recombinant DNA methods or by chemical synthesis. Such non-naturally occurring variants may be made by mutagenesis techniques, including those applied to nucleic acid molecules, cells, or organisms. Accordingly, as discussed above, the variants can contain nucleotide substitutions, deletions, inversions and insertions. Variation can occur in either or both the coding and non-coding regions. The variations can produce both conservative and non-conservative amino acid substitutions.

A fragment comprises a contiguous nucleotide sequence greater than 12 or more nucleotides. Further, a fragment could be at least 30, preferably 40, more preferably 50, even more preferably 100, most preferably 250 or 500 nucleotides in length. The length of the fragment will be based on its intended use. For example, the fragment can encode epitope bearing regions of the peptide, or can be useful as DNA probes and primers. Such fragments can be isolated using the known nucleotide sequence to synthesize an oligonucleotide probe. A labeled probe can then be used to screen a cDNA library, genomic DNA library, or mRNA to

isolate nucleic acid corresponding to the coding region. Further, primers can be used in PCR reactions to clone specific regions of gene.

A probe/primer typically comprises a substantially purified oligonucleotide or oligonucleotide pair. The oligonucleotide typically comprises a region of nucleotide sequence that hybridizes under stringent conditions to at least 12, preferably 20, more preferably 25, even more preferably 40, most preferably 50 or more consecutive nucleotides.

Orthologs, homologs, and allelic variants can be identified using methods known in the art. As described above, these variants comprise a nucleotide sequence encoding a peptide that is typically 60%, preferably 70%, more preferably 80%, even more preferably 85%, and typically at least 90%, preferably 95% or more homologous to the nucleotide sequence provided in SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 19 or SEQ ID NO: 22, or a fragment of these sequences. Such nucleic acid molecules can readily be identified as being able to hybridize under moderate to highly stringent conditions, to the nucleotide sequences shown in SEQ ID NO: 1, SEQ ID NO: 3, SEQ ID NO: 5, SEQ ID NO: 19 or SEQ ID NO: 22, or a fragment thereof..

As used herein, the term "hybridizes under stringent conditions" is intended to describe conditions for hybridization and washing under which nucleotide sequences encoding a peptide at least 50%, preferably 55% or more homologous to each other typically remain hybridized to each other. The conditions can be such that sequences at least 65%, preferably 70%, more preferably 75% or more homologous to each other typically remain hybridized to each other. Standard hybridization conditions from moderate to highly stringent conditions are known to those skilled in the art (See e.g., *Current Protocols in Molecular Biology*, John Wiley & Sons, N.Y. (1989), 6.3.1-6.3.6). Moderate hybridization conditions are defined as equivalent to hybridization in 2X sodium chloride/sodium citrate (SSC) at 30 °C, followed by one or more washes in 1X SSC, 0.1% SDS at 50-60 °C. Highly stringent conditions are defined as equivalent to hybridization in 6X sodium chloride/sodium citrate (SSC) at 45 °C, followed by one or more washes in 0.2X SSC, 0.1% SDS at 50-65 °C.

The nucleic acid molecules of the present invention are useful for probes, primers, chemical intermediates, and in biological assays. The nucleic acid molecules are useful as a hybridization probe for cDNA and genomic DNA to isolate full-length cDNA and genomic clones encoding the peptide described herein and to isolate cDNA and genomic clones that correspond to variants (alleles, orthologs, etc.) producing the same or related peptides described herein.

The probe can correspond to any sequence along the entire length of the nucleic acid molecules provided in the SEQ ID NO: 1, SEQ ID NO: 3. SEQ ID NO: 5, SEQ ID NO: 19 or SEQ ID NO: 22. Accordingly, it could be derived from 5' noncoding regions, the coding region, and 3' noncoding regions.

The nucleic acid molecules are also useful as primers for PCR to amplify any given region of a nucleic acid molecule and are useful to synthesize antisense molecules of desired length and sequence.

The nucleic acid molecules are also useful for constructing recombinant vectors. Such vectors include expression vectors that express a portion of, or all of, the peptide sequences. Vectors also include insertion vectors, used to integrate into another nucleic acid molecule sequence, such as into the cellular genome, to alter *in situ* expression of a gene and/or gene product. For example, an endogenous coding sequence can be replaced via homologous recombination with all or part of the coding region containing one or more specifically introduced mutations.

The nucleic acid molecules are also useful for expressing antigenic portions of the proteins; for determining the chromosomal positions of the nucleic acid molecules by means of *in situ* hybridization methods; for designing ribozymes corresponding to all, or a part, of the mRNA produced from the nucleic acid molecules described herein; for constructing host cells expressing a part, or all, of the nucleic acid molecules and peptides; for constructing transgenic animals expressing all, or a part, of the nucleic acid molecules and peptides; and for making vectors that express part, or all, of the peptides.

The nucleic acid molecules are also useful as hybridization probes for determining the presence, level, form and distribution of nucleic acid expression. Accordingly, the probes can be used to detect the presence of, or to determine levels of, a specific nucleic acid molecule in cells, tissues, and in organisms. The nucleic acid whose level is determined can be DNA or RNA. Accordingly, probes corresponding to the peptides described herein can be used to assess expression and/or gene copy number in a given cell, tissue, or organism. These uses are relevant for diagnosis of disorders involving an increase or decrease in protein expression relative to normal results.

In vitro techniques for detection of mRNA include Northern hybridizations and *in situ* hybridizations. *In vitro* techniques for detecting DNA include Southern hybridizations and *in situ* hybridization.

Probes can be used as a part of a diagnostic test kit for identifying cells or tissues that express a protein.

C. Vectors and Host Cells

The invention also provides vectors containing the nucleic acid molecules described herein. The term "vector" refers to a vehicle, preferably a nucleic acid molecule, that can transport the nucleic acid molecules. When the vector is a nucleic acid molecule, the nucleic acid molecules are covalently linked to the vector nucleic acid. With this aspect of the invention, the vector includes a plasmid, single or double stranded phage, a single or double stranded RNA or DNA viral vector, or artificial chromosome, such as a BAC, PAC, YAC, OR MAC. Various expression vectors can be used to express polynucleotide encoding the mutant peptide of human ERAB or HADH2.

A vector can be maintained in the host cell as an extrachromosomal element where it replicates and produces additional copies of the nucleic acid molecules. Alternatively, the vector may integrate into the host cell genome and produce additional copies of the nucleic acid molecules when the host cell replicates.

The invention provides vectors for the maintenance (cloning vectors) or vectors for expression (expression vectors) of the nucleic acid molecules. The vectors can function in prokaryotic or eukaryotic cells or in both (shuttle vectors).

Expression vectors contain cis-acting regulatory regions that are operably linked in the vector to the nucleic acid molecules such that transcription of the nucleic acid molecules is allowed in a host cell. The nucleic acid molecules can be introduced into the host cell with a separate nucleic acid molecule capable of affecting transcription. Thus, the second nucleic acid molecule may provide a trans-acting factor interacting with the cis-regulatory control region to allow transcription of the nucleic acid molecules from the vector. Alternatively, a trans-acting factor may be supplied by the host cell. Finally, a trans-acting factor can be produced from the

vector itself. It is understood, however, that in some embodiments, transcription and/or translation of the nucleic acid molecules can occur in a cell-free system.

The regulatory sequences to which the nucleic acid molecules described herein can be operably linked include promoters for directing mRNA transcription. These include, but are not limited to, the left promoter from bacteriophage λ, the lac, TRP, and TAC promoters from *E. coli*, the early and late promoters from SV40, the CMV immediate early promoter, the adenovirus early and late promoters, and retrovirus long-terminal repeats (LTR).

In addition to control regions that promote transcription, expression vectors may also include regions that modulate transcription, such as repressor binding sites and enhancers. Examples include the SV40 enhancer, the cytomegalovirus immediate early enhancer, polyoma enhancer, adenovirus enhancers, and retrovirus LTR enhancers.

In addition to containing sites for transcription initiation and control, expression vectors can also contain sequences necessary for transcription termination and, in the transcribed region a ribosome-binding site for translation. Other regulatory control elements for expression include initiation and termination codons as well as polyadenylation signals. The person of ordinary skill in the art would be aware of the numerous regulatory sequences that are useful in expression vectors. Such regulatory sequences are described, for example, in Sambrook et al., (*Molecular Cloning: A Laboratory Manual. 2nd. ed.*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, (1989)).

A variety of expression vectors can be used to express a nucleic acid molecule. Such vectors include chromosomal, episomal, and virus-derived vectors, for example vectors derived from bacterial plasmids, from bacteriophage, from yeast episomes, from yeast chromosomal elements, including yeast artificial chromosomes, from viruses such as baculoviruses, papovaviruses such as SV40, Vaccinia viruses, adenoviruses, poxviruses, pseudorabies viruses, and retroviruses. Vectors may also be derived from combinations of these sources such as those derived from plasmid and bacteriophage genetic elements, e.g., cosmids and phagemids. Appropriate cloning and expression vectors for prokaryotic and eukaryotic hosts are described in Sambrook et al., *Molecular Cloning: A Laboratory Manual. 2nd. ed.*, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, (1989).

The regulatory sequence may provide constitutive expression in one or more host cells (i.e. tissue specific) or may provide for inducible expression in one or more cell types such as by temperature, nutrient additive, or exogenous factor such as a hormone or other ligand. A variety of vectors providing for constitutive and inducible expression in prokaryotic and eukaryotic hosts are known to those of ordinary skill in the art.

The nucleic acid molecules can be inserted into the vector nucleic acid by well-known methodology. Generally, the DNA sequence that will ultimately be expressed is joined to an expression vector by cleaving the DNA sequence and the expression vector with one or more restriction enzymes and then ligating the fragments together. Procedures for restriction enzyme digestion and ligation are known to those of ordinary skill in the art.

The vector containing the appropriate nucleic acid molecule can be introduced into an appropriate host cell for propagation or expression using well-known techniques. Bacterial cells include, but are not limited to, *E. coli*, *Streptomyces*, and *Salmonella typhimurium*. Eukaryotic cells include, but are not limited to, yeast, insect cells such as *Drosophila*, animal cells such as COS and CHO cells, and plant cells.

It may be desirable to express a peptide of the present invention as a fusion protein. Accordingly, the invention provides fusion vectors that allow for the production of such peptides. Fusion vectors can increase the expression of a recombinant protein, increase the solubility of the recombinant protein, and aid in the purification of the protein by acting for example as a ligand for affinity purification. A proteolytic cleavage site may be introduced at the junction of the fusion moiety so that the desired peptide can ultimately be separated from the fusion moiety. Proteolytic enzymes include, but are not limited to, factor Xa, thrombin, and enterokinase. Typical fusion expression vectors include pGEX (Smith et al., (1988) *Gene 67*:31-40), pMAL (New England Biolabs, Beverly, MA) and pRIT5 (Pharmacia, Piscataway, NJ) which fuse glutathione S-transferase (GST), maltose E binding protein, or protein A, respectively, to the target recombinant protein. Examples of suitable inducible non-fusion *E. coli* expression vectors include pTrc (Amann et al., (1988) *Gene 69*:301-315) and pET 11d (Studier et al., (1990) *Gene Expression Technology: Methods in Enzymology 185*:60-89).

Recombinant protein expression can be maximized in a host bacteria by providing a genetic background wherein the host cell has an impaired capacity to proteolytically cleave the recombinant protein. (Gottesman, S., *Gene Expression Technology: Methods in Enzymology* 185, Academic Press, San Diego, California (1990) 119-128). Alternatively, the sequence of the

nucleic acid molecule of interest can be altered to provide preferential codon usage for a specific host cell, for example *E. coli*. (Wada et al., (1992) *Nucleic Acids Res. 20*:2111-2118).

The nucleic acid molecules can also be expressed by expression vectors that are operative in yeast. Examples of vectors for expression in yeast e.g., *S. cerevisiae* include pYepSec1 (Baldari, et al., (1987) *EMBO J. 6*:229-234), pMFa (Kurjan et al., (1982) *Cell 30*:933-943), pJRY88 (Schultz et al., (1987) *Gene 54*:113-123), and pYES2 (Invitrogen Corporation, San Diego, CA).

The nucleic acid molecules can also be expressed in insect cells using, for example, baculovirus expression vectors. Baculovirus vectors available for expression of proteins in cultured insect cells (e.g., Sf 9 cells) include the pAc series (Smith et al., (1983) *Mol. Cell Biol. 3*:2156-2165) and the pVL series (Lucklow et al., (1989) *Virology 170*:31-39).

In certain embodiments of the invention, the nucleic acid molecules described herein are expressed in mammalian cells using mammalian expression vectors. Examples of mammalian expression vectors include pCDM8 (Seed, B. (1987) *Nature 329*:840) and pMT2PC (Kaufman et al., (1987) *EMBO J. 6*:187-195).

The expression vectors listed herein are provided by way of example only of the well-known vectors available to those of ordinary skill in the art that would be useful to express the nucleic acid molecules. Preferred vectors include the pET28a (Novagen, Madison, WI), pAcSG2 (Pharmingen, San Diego, CA), and pFastBac (Life Technologies, Gaithersburg, MD). The person of ordinary skill in the art would be aware of other vectors suitable for maintenance propagation or expression of the nucleic acid molecules described herein. These are found for example in Sambrook, J., Fritsh, E. F., and Maniatis, T. *Molecular Cloning: A Laboratory Manual. 2nd, ed., Cold Spring Harbor Laboratory,* Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989.

The invention also encompasses vectors in which the nucleic acid sequences described herein are cloned into the vector in reverse orientation, but operably linked to a regulatory sequence that permits transcription of antisense RNA. Thus, an antisense transcript can be produced to all, or to a portion, of the nucleic acid molecule sequences described herein, including both coding and non-coding regions. Expression of this antisense RNA is subject to

each of the parameters described above in relation to expression of the sense RNA (regulatory sequences, constitutive or inducible expression, tissue-specific expression).

The invention also relates to recombinant host cells containing the vectors described herein. Host cells therefore include prokaryotic cells, lower eukaryotic cells such as yeast, other eukaryotic cells such as insect cells, and higher eukaryotic cells such as mammalian cells. Preferred host cells of the instant invention include *E. coli* and Sf9.

The recombinant host cells are prepared by introducing the vector constructs described herein into the cells by techniques readily available to the person of ordinary skill in the art. These include, but are not limited to, calcium phosphate transfection, DEAE-dextran-mediated transfection, cationic lipid-mediated transfection, electroporation, transduction, infection, lipofection, and other techniques, such as those found in Sambrook et al. (*Molecular Cloning: A Laboratory Manual. 2nd, ed., Cold Spring Harbor Laboratory,* Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1989).

Host cells can contain more than one vector. Thus, different nucleotide sequences can be introduced on different vectors of the same cell. Similarly, the nucleic acid molecules can be introduced either alone or with other nucleic acid molecules that are not related to the nucleic acid molecules such as those providing trans-acting factors for expression vectors. When more than one vector is introduced into a cell, the vectors can be introduced independently, co-introduced or joined to the nucleic acid molecule vector.

In the case of bacteriophage and viral vectors, these can be introduced into cells as packaged or encapsulated virus by standard procedures for infection and transduction. Viral vectors can be replication-competent or replication-defective. In the case in which viral replication is defective, replication will occur in host cells providing functions that complement the defects.

Vectors generally include selectable markers that enable the selection of the subpopulation of cells that contain the recombinant vector constructs. The marker can be contained in the same vector that contains the nucleic acid molecules described herein or may be on a separate vector. Markers include tetracycline or ampicillin-resistance genes for prokaryotic host cells and dihydrofolate reductase or neomycin resistance for eukaryotic host cells. However, any marker that provides selection for a phenotypic trait will be effective.

While the active proteins can be produced in bacteria, yeast, mammalian cells, and other cells under the control of the appropriate regulatory sequences, cell- free transcription and translation systems can also be used to produce these proteins using RNA derived from the DNA constructs described herein.

Where secretion of the peptide is desired, appropriate secretion signals are incorporated into the vector. The signal sequence can be endogenous to the peptides or heterologous to these peptides.

It is also understood that depending upon the host cell in recombinant production of the peptides described herein, the peptides can have various glycosylation patterns, depending upon the cell, or maybe non-glycosylated as when produced in bacteria. In addition, the peptides may include an initial modified methionine in some cases as a result of a host-mediated process.

The recombinant host cells expressing the peptides described herein have a variety of uses. First, the cells are useful for producing a peptide or protein that can be further purified to produce desired amounts of protein or fragments. Thus, host cells containing expression vectors are useful for peptide production.

Host cells are also useful for conducting cell-based assays involving the ERAB or HADH2 protein/peptide, or its fragments. Thus, a recombinant host cell expressing a native protein is useful for assaying compounds that stimulate or inhibit protein function.

Host cells are also useful for identifying ERAB or HAHD2 protein mutants in which these functions are affected. If the mutants naturally occur and give rise to a pathology, host cells containing the mutations are useful to assay compounds that have a desired effect on the mutant protein (for example, stimulating or inhibiting function) which may not be indicated by their effect on the native protein.

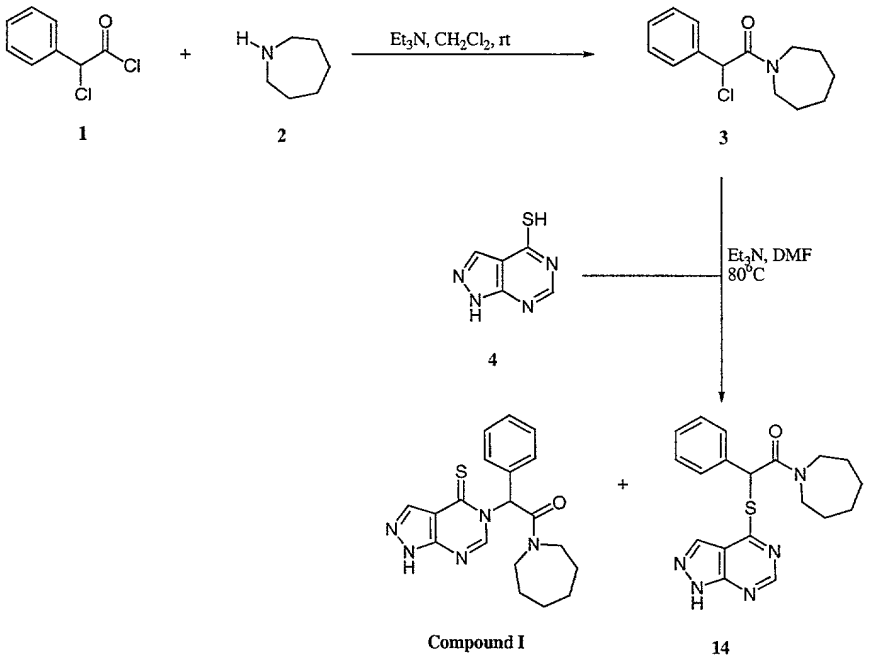
EXAMPLES

A. Synthesis of an ERAB or HADH2 Inhibitor (Compound I)

The structure of Compound I as a single enantiomer is shown in Figure 4A. Compound I was synthesized using two reaction schemes. The abbreviations employed in the Schemes have

the following meaning unless otherwise indicated: Me: methyl; Et: ethyl; Ac: acetyl; Boc: butyloxycarbonyl; EtoAc: ethyl acetate; TFA: trifluoroacetic acid; DCC: dicyclohexylcarbodimide; rt: room temperature; HATU: [O-(7-azabenzotriazol-1-yl)-1,1,3,3-tetra-triethyl-uronium hexafluorophsphate; DMAP: N,N-dimethyl-4-aminopyridine; and DMF: dimethylformamide.

1. Preparation of 1-azepan-1-yl-2-phenyl-2-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)-ethanone (Compound I) according to Scheme 1.



Scheme 1

1-a. General description of Scheme 1.

2-Chloro-2-phenyl-acetyl chloride (1) and hexamethyleneimine (2) are reacted in dichloromethane in the presence of triethylamine to afford the intermediate (3). This intermediate (3) is then carried forward and reacted with commercially available 4-mercapto-1*H*-pyrazolo[3,4-*d*] pyrimidine (4) to afford a mixture of products Compound I and 14. The two products are separated via column chromatography to yield 1-azepan-1-yl-2-phenyl-2-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)-ethanone (Compound I) as the minor and 14 major products respectively. The desired Compound I is further purified via preparatory HPLC to yield the

product in >95% purity. Compound I, made according to Scheme 1, when tested against ERAB as described below, exhibited an IC_{50} = 88 nM.

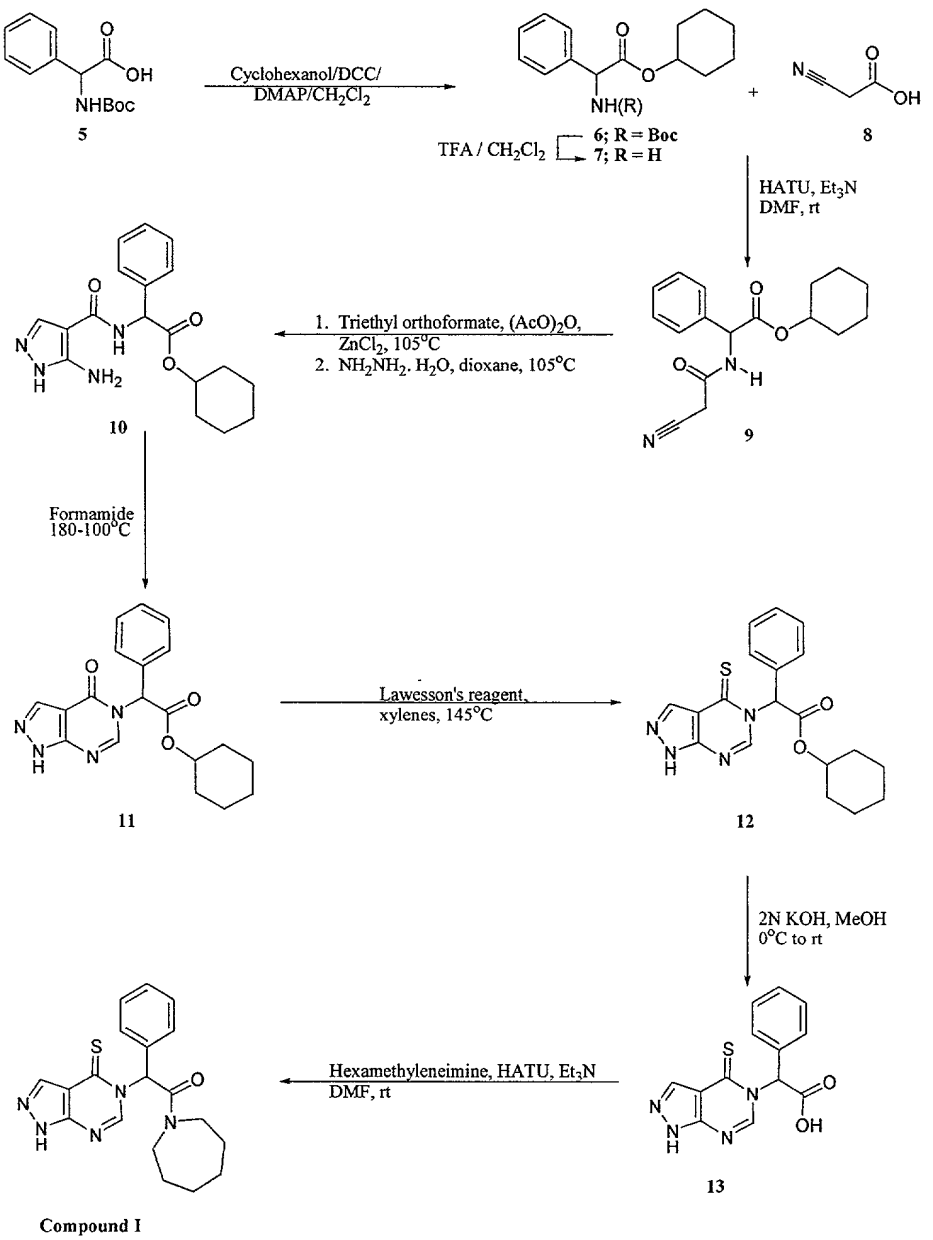
1-b. Experimental Section to Scheme 1.

2-Chloro-2-phenyl-acetyl chloride (1) (2.50 ml, 15.75 mmol) was dissolved in CH_2Cl_2 (50 ml), the mixture was cooled to 0°C, hexamethyleneimine (2) (1.76 ml, 15.75 mmol) was added dropwise, followed by triethylamine (2.19 ml, 15.75 mmol). The resulting mixture containing intermediate (3) was stirred at 0°C for 15 min followed by warming to room temperature and stirring an additional 60 min. The mixture (3) was then concentrated on a rotary evaporator, the residual oil was taken up in dimethylformamide (DMF) (50 ml), triethylamine (2.19 ml, 15.75 mmol) was added, followed by addition of 4-mercapto-1*H*-pyrazolo[3,4-*d*] pyrimidine (4) (2.33g, 15.44 mmol) in one portion as a solid. The reaction product was warmed to 80°C and stirred for approximately 17 h. The reaction product was cooled to room temperature, diluted with water, and extracted with EtOAc (3 x 30 ml), and the combined organics were washed with brine, dried over anhyd. Na_2SO_4, filtered and concentrated to obtain crude products (Compound I and 14). The crude products were purified on silica gel eluting with 30-40-80 % ethyl acetate/hexane to yield two products. 3.55 g of the product (14) with the lower R_f was isolated as a white solid. The desired compound (0.266g) with higher R_f was obtained as a tan solid. This product was further purified by preparatory HPLC (5-95% CH_3CN/H_2O, 10 min, followed by 95% CH_3CN/H_2O, 0.1% trifluoroacetic acid (TFA), 10 min)). The desired HPLC fractions were combined, diluted with brine (30 ml), 50% aqueous $NaHCO_3$ solution (30 ml) was added, and the aqueous layer extracted with EtOAc (3 x 30 ml), combined organics washed with brine, dried over anhyd. Na_2SO_4, filtered and concentrated to yield (0.178 g, 0.484 mmol) >95% purity of Compound I. mp: 201-202 °C; R_f = 0.60 (EtOAc:Hexanes = 6:4). ^{1}H-NMR; (DMSO-d6) δ 14.18 (s, 1H), 8.27 (s, 1H), 8.17 (s, 1H), 7.95 (s, 1H), 7.52-7.54 (m, 3H), 7.39-7.41 (m, 2H), 3.19-3.74 (m, 4H), 1.34-1.90 (m, 8H). Anal. Calcd for $C_{19}H_{21}N_5OS \cdot 0.2$ TFA $\cdot 0.4$ H_2O: C, 62.10; H, 5.76; N, 19.06. Found: C, 58.59; H, 5.53; N, 17.84; MALDI HRMS Calcd for $C_{19}H_{21}N_5OS$ (M+H) = 368.1545, observed (M+H) = 368.1535; HPLC: 10% CH_3CN/H_2O (0.1%TFA)-90% CH_3CN/H_2O (0.1%TFA): Retention time = 13.80 min.

2. Preparation of 1-azepan-1-yl-2-phenyl-2-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)-ethanone (Compound I) according to Scheme 2.

added dropwise, followed by triethylamine (2.19 ml, 15.75 mmol). The resulting mixture containing intermediate (3) was stirred at 0°C for 15 min followed by warming to room temperature and stirring an additional 60 min. The mixture (3) was then concentrated on a rotary evaporator, the residual oil was taken up in dimethylformamide (DMF) (50 ml), triethylamine (2.19 ml, 15.75 mmol) was added, followed by addition of 4-mercapto-1*H*-pyrazolo[3,4-*d*] pyrimidine (4) (2.33g, 15.44 mmol) in one portion as a solid. The reaction product was warmed to 80°C and stirred for approximately 17 h. The reaction product was cooled to room temperature, diluted with water, and extracted with EtOAc (3 x 30 ml), and the combined organics were washed with brine, dried over anhyd. Na_2SO_4, filtered and concentrated to obtain crude products (Compound I and 14). The crude products were purified on silica gel eluting with 30-40-80 % ethyl acetate/hexane to yield two products. 3.55 g of the product (14) with the lower R_f was isolated as a white solid. The desired compound (0.266g) with higher R_f was obtained as a tan solid. This product was further purified by preparatory HPLC (5-95% CH_3CN/H_2O, 10 min, followed by 95% CH_3CN/H_2O, 0.1% trifluoroacetic acid (TFA), 10 min)). The desired HPLC fractions were combined, diluted with brine (30 ml), 50% aqueous $NaHCO_3$ solution (30 ml) was added, and the aqueous layer extracted with EtOAc (3 x 30 ml), combined organics washed with brine, dried over anhyd. Na_2SO_4, filtered and concentrated to yield (0.178 g, 0.484 mmol) >95% purity of Compound I. mp: 201-202 °C; R_f = 0.60 (EtOAc:Hexanes = 6:4). ^{1}H-NMR; (DMSO-d6) δ 14.18 (s, 1H), 8.27 (s, 1H), 8.17 (s, 1H), 7.95 (s, 1H), 7.52-7.54 (m, 3H), 7.39-7.41 (m, 2H), 3.19-3.74 (m, 4H), 1.34-1.90 (m, 8H). Anal. Calcd for $C_{19}H_{21}N_5OS \cdot 0.2$ TFA $\cdot 0.4$ H_2O: C, 62.10; H, 5.76; N, 19.06. Found: C, 58.59; H, 5.53; N, 17.84; MALDI HRMS Calcd for $C_{19}H_{21}N_5OS$ (M+H) = 368.1545, observed (M+H) = 368.1535; HPLC: 10% CH_3CN/H_2O (0.1%TFA)-90% CH_3CN/H_2O (0.1%TFA): Retention time = 13.80 min.

2. Preparation of 1-azepan-1-yl-2-phenyl-2-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)-ethanone (Compound I) according to Scheme 2.



Scheme 2

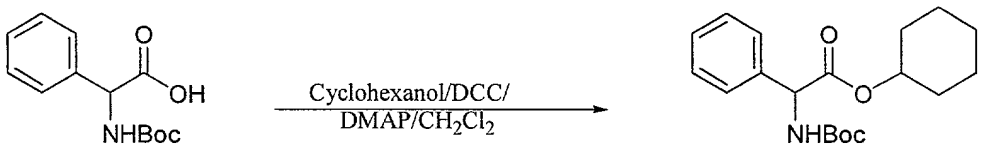
2-a. General description of Scheme 2.

Boc-L-α-phenylglycine (5) and cyclohexanol are reacted in dichloromethane in the presence of dicyclohexylcarbodiimide (DCC) and catalytic amount of N,N-dimethyl-4-aminopyridine (DMAP) to give 6 (R = Boc) in almost quantitative yield. Treatment of 6 with trifluoroacetic acid (TFA) yields 7 (R = H) in 98% yield. 7 is then coupled to alpha-cyanoacetic acid (8) using O-(7-azabenzotriazol-1-yl)-1,1,3,3-tetra-triethyl-uronium hexafluorophosphate (HATU) as the coupling agent to afford (2-cyano-acetylamino)-phenyl-acetic acid cyclohexyl ester (9). The reaction of 9 with triethyl orthoformate in acetic anhydride and catalytic anhydrous

$ZnCl_2$ gives an intermediate which upon reaction with hydrazine in 1,4-dioxane at 105°C affords 10 in 51 % yield. The [(5-amino-1H-pyrazol-4-carbonyl)-amino]-phenyl-acetic acid cyclohexyl ester (10) is then treated with formamide at 180-100°C to give the desired cyclized product (11). Compound 11 is treated with Lawesson's reagent under inert gas atmosphere to afford compound 12. Hydrolysis of compound 12 affords the carboxylic acid 13, which is then coupled to hexamethyeneimine using the coupling reagent HATU to afford Compound I.

2-b. Experimental Section to Scheme 2.

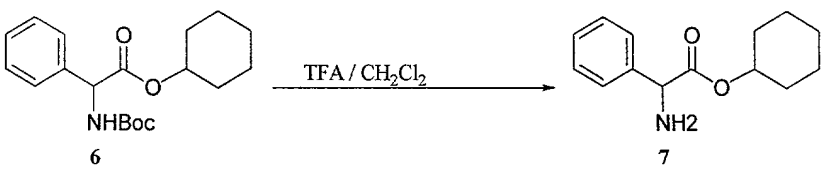
Step 1: *tert*- Butoxycarbonylamino-phenyl- acetic acid cyclohexyl ester (6).



5 6

To an ice-cold suspension of Boc-L-α-phenylglycine (5) (14.14g, 40.35 mmol) and DMAP (0.5g, 4.04 mmol) and cyclohexanol (5.12 ml, 48.42 mmol) in 60 ml of CH_2Cl_2 was slowly added DCC (9.16g, 44.4 mmol). The resulting mixture was stirred at 0°C to room temperature and monitored by TLC. Upon completion the reaction was filtered and the precipitate was washed with CH_2Cl_2 to remove most of the N,N'-dicyclohexylurea. The filtrate was then partitioned between CH_2Cl_2 and satd. $NaHCO_3$ and the layers separated. The aqueous phase was extracted with CH_2Cl_2 (2 x 200 ml), and the combined organics were washed with H_2O (150 ml), brine (150 ml) and dried over anhyd. Na_2SO_4, filtered, and concentrated under reduced pressure. The resulting yellowish oil was chromatographed on silica gel using Hexane:EtOAc = 2:1 as the elutant to yield compound 6 (13.37 g, 39.95 mmol, 99% yield) as a viscous yellow oil. TLC; R_f = 0.7 (EtOAc:Hexanes = 6:4). ^{1}H-NMR; ($CDCl_3$) δ 1.27-1.83 (m, 10H), 1.47 (s, 9H) 4.78-4.83 (m, 1H), 5.31-5.33 (d, 1H, J = 8 Hz), 5.61-5.63 (br, s, 1H, NH), 7.32-7.41 (m, 5H). MS Calcd for $C_{19}H_{27}NO_4$ (M+H) = 334, observed (M+H) = 334; HPLC: 30% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20 min: Retention time = 14.61 min.

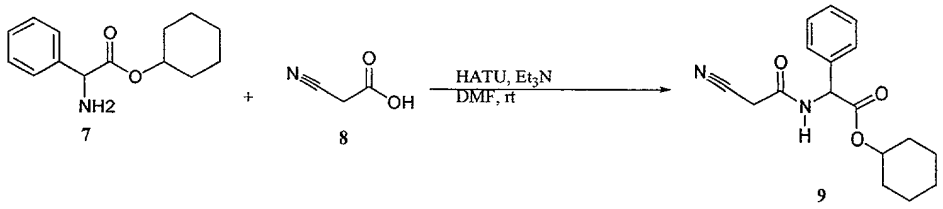
Step 2: Amino-phenyl- acetic acid cyclohexyl ester (7).



6 7

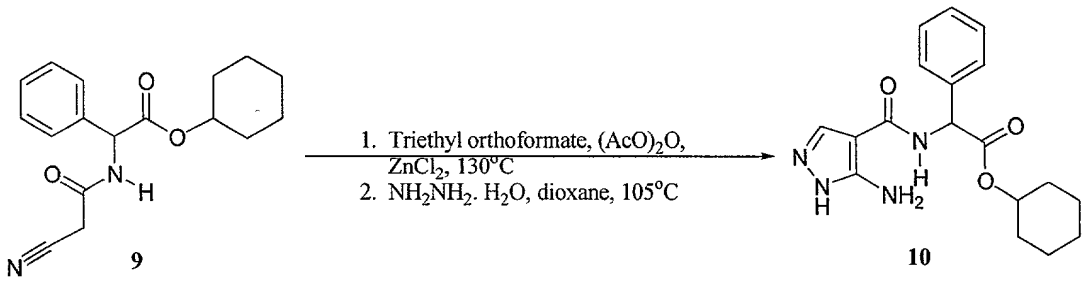
To a solution of **6** (13.27 g, 39.79 mmol) in 50 ml of CH_2Cl_2 at 0°C was added TFA (30 ml, 385.1 mmol) dropwise. The resulting yellowish mixture was stirred at 0°C to room temperature overnight. The reaction was then concentrated under reduced pressure and the resulting yellow oil was partitioned between CH_2Cl_2 (300 ml) and satd. $NaHCO_3$ (150 ml) and the layers separated. The aqueous phase was extracted with CH_2Cl_2 (2 x 150 ml) and the combined organics were washed with H_2O (150 ml), brine (150 ml) and dried over anhyd. Na_2SO_4, filtered and concentrated under reduced pressure to yield compound **7** (9.05 g, 38.99 mmol, 98% yield) as a yellow oil. TLC; $R_f = 0.7$ (CH_2Cl_2:MeOH = 9:1). ^{1}H-NMR ($CDCl_3$) δ 1.25-2.03 (m, 10H), 4.62 (s, 1H), 4.81-4.85 (m, 1H), 7.30-7.43 (m, 5H). MS Calcd for $C_{14}H_{19}NO_2$ (M+H) = 334, observed (M+H) = 334; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 7.52 min.

Step 3: (2-Cyano-acetylamino)-phenyl- acetic acid cyclohexyl ester (9).



To a solution of **7** (9.01 g, 38.63 mmol), α-cyanoacetic acid (**8**) (3.58 g, 42.05 mmol) and triethylamine (12 ml, 84.1 mmol) in 60 ml of DMF at 0°C was added HATU (24 g, 63.1 mmol). The yellow solution was stirred at 0°C to room temperature overnight. The reaction was then partitioned between EtOAc (300 ml) and H_2O (150 ml) and the layers separated. The organic phase was washed with satd. $NaHCO_3$ (150 ml), H_2O (150 ml), 0.5 N HCl (150 ml), brine (150 ml), and dried over anhyd. Na_2SO_4, filtered and concentrated under reduced pressure. The resulting yellow oil was chromatographed on silica gel using hexane:EtOAc = 1:1 as the elutant to yield compound **9** (6.57 g, 21.88 mmol, 57% yield) as a white solid. mp: 114-116 ° C; TLC; $R_f = 0.8$ (EtOAc:Hexanes = 1:1). ^{1}H-NMR; ($CDCl_3$) δ 1.28-1.85 (m, 10H), 3.45 (s, 2H), 4.87-5.00 (m, 1H), 5.54-5.56 (d, 1H, J = 7 Hz), 7.10-7.29 (br, s, 1H, NH), 7.29-7.39 (s, 5H). MS Calcd for $C_{17}H_{20}N_2O_3$ (M+Na) = 323, observed (M+Na) = 323; HPLC: 30% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 9.67 min.

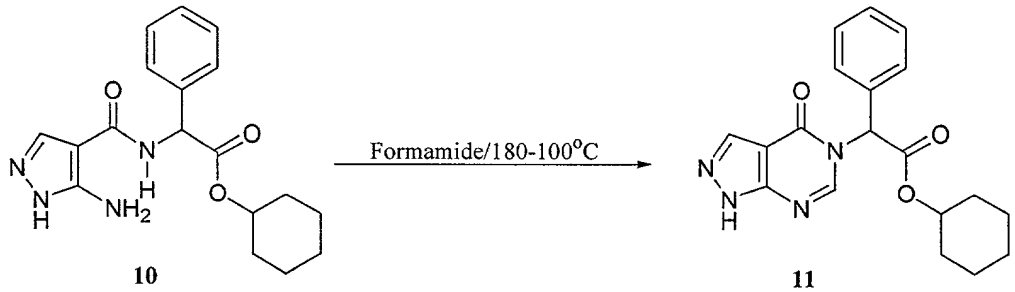
Step 4: (5-Amino-1*H*-pyrazol-4-carbonyl)-amino]-phenyl-acetic acid cyclohexyl ester (10)



9 10

A round-bottom flask was charged with compound 9 (2.3 g, 7.67 mmol), triethyl orthoformate (9.0 ml, 53.7 mmol), acetic anhydride (4.5 ml, 46.02 mmol), and anhyd. $ZnCl_2$ (1.05 g, 7.67 mmol), and then heated to reflux at 130 °C for 4 h, most preferably 105 °C for 4 h. The yellow reaction mixture was concentrated under vacuum and azeotroped with toluene (3 x 15 ml). The resulting was titrated with CH_2Cl_2 (100 ml) filtered and washed with CH_2Cl_2 (150 ml). The filtrate was then concentrated under vacuum to yield crude residue as yellow grease. The crude residue was treated with hydrazine hydrate (0.56 ml, 11.51 mmol) in 10 ml of 1,4-dioxane and then refluxed at 105°C overnight. The reaction was cooled to room temperature and concentrated under vacuum. The residue was partitioned between EtOAc (250 ml) and satd. $NaHCO_3$, brine (2 x 100 ml), dried over anhyd. Na_2SO_4, filtered and concentrated under vacuum to afford the crude product as a yellow grease. The crude product was chromatographed using silica gel and eluted with CH_2Cl_2:MeOH = 9:1 to afford compound 10 (1.343 g, 3.92 mmol, 51 % yield) as a white solid. mp: 92-94 °C; TLC; R_f = 0.4 (CH_2Cl_2:MeOH = 9:1). ^{1}H-NMR; ($CDCl_3/CD_3OD$) δ 1.14-1.37 (m, 4H), 1.38-1.41 (m, 2H), 1.52-1.54 (m, 2H); 1.67-1.71 (m, 2H), 4.68-4.72 (m, 1H), 5.53 (s, 1H), 7.29-7.30 (m, 5H), 7.79 (s, 1H). MS Calcd for $C_{18}H_{22}N_4O_3$ (M+H) = 343, observed (M+H) = 343; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 9.24 min.

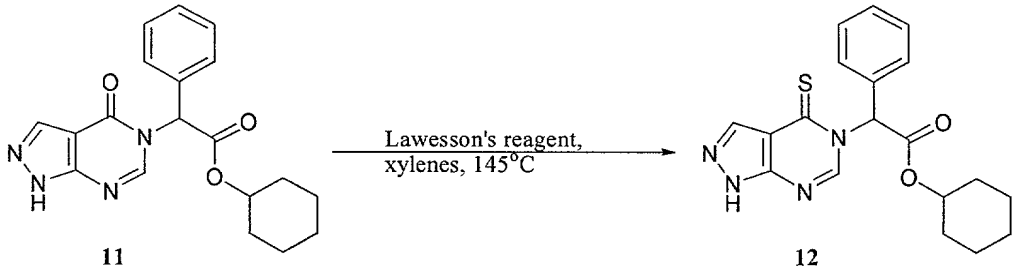
Step 5: (4-Oxo-1,4-dihydro-pyrazolo[3,4-*d*] pyrimidin-5-yl)-phenyl-acetic acid cyclohexyl ester (11).



10 11

Compound 10 (1.244 g, 3.63 mmol) in 8 ml of formamide was heated to 180°C for 4 h and then at 100°C overnight, most preferably 145° overnight. The cooled reaction was filtered and the white precipitate product (11) was washed with and dried in a vacuum oven over P_2O_5. Additionally, the filtrate was concentrated under reduced pressure and the residue was partitioned between EtOAc (250 ml) and satd. $NaHCO_3$ (2 x 100 ml), wash with brine (100 ml), dried over anhyd. Na_2SO_4, filtered and concentrated under vacuum to afford the crude product as a yellow grease, which was then chromatographed using silica gel and eluted with CH_2Cl_2:EtOAc (1:1) to afford an additional 0.341 g, 0.97 mmol, and 27 % of compound 11 as a white solid. mp: 176-180 °C; TLC; $R_f = 0.5$ (CH_2Cl_2: EtOAc = 1:1). ^{1}H-NMR; ($CDCl_3$) δ 1.24-1.91 (m, 10H), 4.98-5.03 (m, 1H), 6.84 (s, 1H), 7.29-7.30 (m, 2H), 7.36-7.49 (m, 3H), 7.91 (s, 1H), 8.23 (s, 1H). MS Calcd for $C_{19}H_{20}N_4O_3$ (M+H) = 353, observed (M+H) = 353; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 12.9 min.

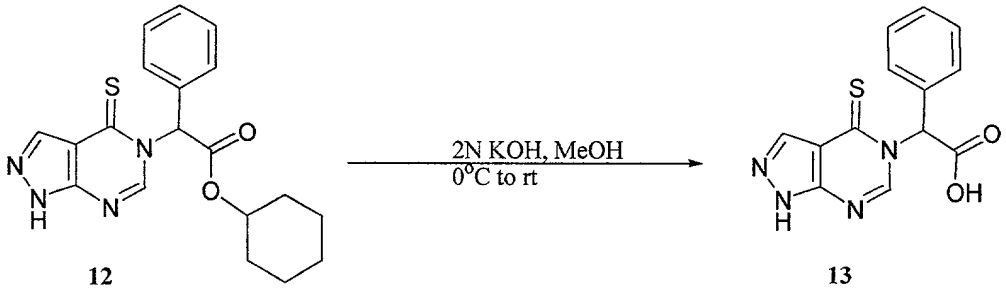
Step 6: 2-Phenyl-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)-acetic acid cyclohexyl ester (12).



11 12

A solution of compound 11 (0.326 g, 0.93 mmol) in 5 ml of xylene was purged with argon for 20 minutes, to which was then added Lawesson's reagent (0.375 g, 0.93 mmol) and the resulting mixture heated at 145°C for 2 h under argon. The yellow reaction mixture was concentrated under vacuum and partitioned between EtOAc (100 ml) and satd. $NaHCO_3$, washed with brine (2 x 50 ml), dried over anhyd. Na_2SO_4, filtered and concentrated under vacuum. The crude product was chromatographed using silica gel and eluted with CH_2Cl_2: EtOAc (1:1) to afford 0.316 g, 0.86 mmol, 92 % yield of product 12 as a off white solid. mp: 170-173 °C; TLC: $R_f = 0.8$ (CH_2Cl_2:EtOAc = 1:1). ^{1}H-NMR ($CDCl_3$) δ 1.30-1.93 (m, 10H), 5.03 (m, 1H), 7.41-7.49 (m, 5H), 7.98 (s, 1H), 8.04 (s, 1H), 8.38 (s, 1H), 10.55 (br, s, 1H, NH). MS Calcd for $C_{19}H_{20}N_4O_2S$ (M+H) = 368, observed (M+H) = 369; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 14.6 min.

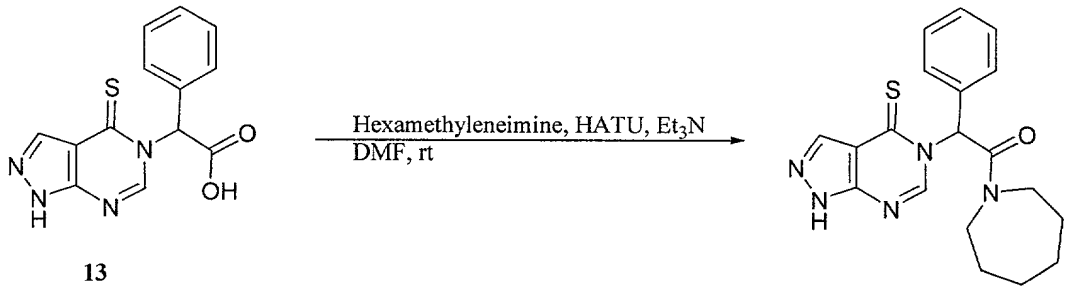
Step 7: 2-Phenyl-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)acetic acid (13).



12 13

To a solution of 2-phenyl-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl)acetic acid cyclohexyl ester (12), 0.467g, 1.27 mmol, in 10 ml of methanol was added to 2N KOH aqueous solution (1.3ml, 2.53 mmol) at 0°C. The resulting mixture of yellow solution was stirred at 0°C to room temperature overnight. The reaction mixture was concentrated by vacuum to remove most of methanol and water was added. The pH was adjusted to 4.0 with aqueous 10% citric acid solution. The product was extracted with EtOAc (2 x 75ml). The combined organic layer was washed with water, brine and dried over anhyd. Na_2SO_4, then concentrated by vacuum to afford compound 13 (0.354 g, 1.19 mmol, 97 % yield) as an off-white solid. mp: 95-98 °C; TLC; R_f = 0.1 (CH_2Cl_2:MeOH = 9:1). ^{1}H-NMR; (CD_3OD) δ 3.23 (s, 1H), 7.50 (s, 5H), 8.08 (s, 1H), 8.09 (s, 1H), 8.34 (s, 1H, NH). MS Calcd for $C_{13}H_{10}N_4O_2S$ (M+H) = 287, observed (M+H) = 287; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 3.9 min.

Step 8: 1-Azepan-1-yl-2-phenyl-2-(4-thioxo-1,4-dihydro-1,4-dihrdropyrazolo[3, 4-*d*]pyrimidin-5-yl)-ethanone (Compound I).



13 **Compound I**

To a solution of 2-phenyl-(4-thioxo-1,4-dihydro-pyrazolo[3,4-d]pyrimidin-5-yl) acetic acid (13), 0.064 g, 0.22 mmol, and hexamethyleneimine (0.023 g, 0.23 mmol) with 4-

methylmorpholine (50 µl, 0.44mol) in 3 ml of DMF at 0°C was added HATU [O-(7-azabenzotriazol-1-yl)-1,1,3,3-tetra-triethyl-uronium hexafluorophosphate] (0.125g, 0.33mol). The resulting mixture of yellow solution was stirred at 0°C to room temperature for overnight. The yellow reaction mixture was partitioned between EtOAc (100 ml) and brine, satd. $NaHCO_3$, brine (3 x 50 ml). The organic layer dried over anhyd. Na_2SO_4, filtered and concentrated under vacuum. The crude product was chomatographed using silica gel and eluted with CH_2Cl_2: EtOAc (1:1) to afford Compound I (0.043 g, 0.12 mmol, 53 % yield) as a yellowish solid. The Compound I obtained via the above procedure appears to be a different crystalline form from that obtained via Scheme 1. This may account for the different melting points. Co-injection of Compound I obtained via step 8, Scheme 2 and that from Scheme 1 gave a single peak via HPLC. mp: >230°C. TLC; R_f = 0.7 (CH_2Cl_2:EtOAc = 1:1). ^{1}H-NMR; ($CDCl_3$) δ 1.60-2.08 (m, 8H), 3.37-3.84 (m, 4H), 7.44-7.49 (m, 5H), 8.09 (s, 1H), 8.36 (s, 1H), 8.41 (s,1H), 10.65 (s, br, 1H, NH). MS Calcd for $C_{19}H_{21}N_5OS$ (M+H) = 368, observed (M+H) = 368; HPLC: 5% CH_3CN/H_2O (0.1%TFA) to 90% CH_3CN/H_2O (0.1%TFA)/20min. Retention time = 11.66 min.

B. Cloning, Overexpression, and Purification of wild type and mutant peptides of ERAB or HADH2.

The coding sequence for full length wild-type ERAB or HADH2 [SEQ ID NO: 7, Yan et al., (1997), *supra*; He et al., (1998), *supra*] was amplified by PCR [Mullis et al., *Cold Spring Harbor Symposium Quantum Biology,* Vol. 51, pp. 263-273 (1986); Saiki et al., *Science*, Vol. 239, pp. 487-491 (1988)] from a Marathon-Ready human lung cDNA library and the Advantage™ cDNA PCR kit, both from Clontech (Palo Alto, CA), using the manufacturer's instructions. The forward primer was 5'-GGGCACACCATGGCAGCAGCGTGTCGGAGCGTGAAGG-3' (SEQ ID NO: 9) and the reverse primer was 5'-AGCTTTCGGCCGTTAAGGCTGCATACGAATAGCCCCATCC-3' (SEQ ID NO: 10).

The amplified DNA was digested with the restriction enzymes *Nco*I and *Eag*I, ligated into the *E. coli* plasmid pMGH4 [Kan et al., *Journal of Protein Chemistry*, Vol. 11, pp. 467-473 (1992); Schoner et al., *Proceedings of National Academy of Science, USA*, Vol. 83, pp. 8506-8510 (1986)], sequence verified, and compared to the sequences in GENBANK Accession numbers AF035555 and U96132.

Mutations were introduced by oligonucleotide site-directed mutagenesis [Kunkel, *Proceedings of National Academy of Science, USA*, Vol. 82, pp. 488-492 (1985)] using the Muta-

Gene *in vitro* Mutagenesis Kit (obtained from Bio-rad, Hercules, CA). The ssDNA uracil template (minus strand) was created in *E. coli* strain CJ236 supplied in the kit using the pMGH4-ERAB or HADH2 construct. All DNA modification and restriction enzymes were purchased from New England Biolabs and oligonucleotides were purchased from Genosys Biotechnology.

The following oligonucleotides were used for mutagenesis:

C5V 5'-CCATGGCAGCAGCTGTTCGGAGCGTGAAGG-3' (SEQ ID NO: 11)

C58V 5'-GAAGTTAGGAAACAACGTTGTTTTCGCCCCAGCC-3' (SEQ ID NO: 12)

C214R 5'-CCAGAGAAAGTGCGTAACTTCTTAGCCAGCCAAG-3' (SEQ ID NO: 13)

C124A 5' -CCAGAGAAAGTAGCAAACTTCCTCGCCAGCCAAG-3' (SEQ ID NO: 21)

C214S 5' –CCAGAGAAAGTGTCTAACTTCTTAGCCAGCCAAG-3' (SEQ ID NO: 24)

All mutants were sequence-verified through the region of the mutations and tested for expression in a spontaneous mutant of *E. coli* strain Bl21(DE3) (obtained from Novagen, Madison, WI) [See Miroux et al., *Journal of Molecular Biology*, Vol. 260, pp. 289-298 (1996)].

Wild-type and mutant proteins were purified in the same manner. The final purification protocol was modified from published reports [Furuta et al., *Biochemistry Biophysics Acta*, Vol. 1350, pp. 317-324 (1997)]. All procedures were carried out at 4 °C. Cell paste was resuspended in half volume 50 mM Tris-HCl pH 7.5, 1 mM EDTA, 10 mM β-mercaptoethanol (BME). The cells were disrupted by micro-fluidization. Cleared supernatant was passed through a Q-Sepharose Fast Flow column. Unbound enzyme was collected in the flow through. This was loaded directly onto a Blue Sepharose Fast Flow column equilibrated in 20 mM Tris - HCl pH 7.5, 10 mM BME, 0.01% NaN_3. ERAB or HADH2 was eluted with a salt gradient increasing to 1 M NaCl over 10 column volumes. Peak fractions were concentrated for size exclusion. The pool was fractionated on a 500 ml Superdex 200 column equilibrated in 20 mM Tris - HCl pH 7.5, 200 mM NaCl, 5 - 10 mM BME, 0.01% NaN_3. The peak eluted as a tetramer. The peak fractions were concentrated to 20 – 25 mg/ml and stored in aliquots at – 20 °C. All chromatography media were from Pharmacia Biotech.

C. Isothermal Titration Calorimetry

Titrations described herein were performed with an MCS microcalorimeter (obtained from MicroCal, Inc., Northampton, MS).

For the inhibitor binding experiments, the titrations were performed in 25 mM MOPS (pH 7.5), 125 mM NaCl, 10% glycerol, 2.0% DMSO, 0.5 mM TCEP (Tri(2-carboxyethyl)phosphine), 0.1 mM EDTA at 15 °C. The syringe contained 415 μM wild-type ERAB or HADH2 and the cell contained either 20 μM inhibitor, 20 μM cofactor, or 20 μM each of inhibitor and cofactor. After a preliminary 20 μL injection, 12 injections of 10.0 μL each were made at 4 minute intervals. Dilution control titrations of buffer into buffer, protein into buffer, and buffer into inhibitor, cofactor and inhibitor/cofactor mixture were also performed. For the cofactor binding experiments, the titrations were performed in 50 mM MOPS (3-(N-morpholino) propanesulfonic acid, pH 7.5), 250 mM NaCl, 10% glycerol, 2.0% DMSO, 10 mM TCEP at 15°C.

For the NADH titration, the syringe contained 700 μM cofactor and the cell contained 35 μM wild type ERAB or HADH2. For the NAD^+ titration, the syringe contained 2.68 mM cofactor and the cell contained 127 μM wild-type ERAB or HADH2.

The IC_{50} value for Compound I was determined spectrophotometrically by monitoring the reduction of NADH to NAD^+ with acetoacetyl-CoA as substrate. Enzyme (2.5 nM) was preincubated with inhibitor for 400 seconds at 30°C in the presence of 36 uM NADH, 25 mM MOPS, pH 7.5, 250 mM NaCl, 2%(v/v) DMSO, and 2.5 mM TCEP. The reaction was initiated by addition of substrate (38 μM). Reduction of NADH was monitored at 340 λ. The IC_{50} value was determined by non-linear regression analysis using KaleidaGraph (obtained from Synergy Software, Reading, PA).

Compound I made according to Scheme 2 was found to have an average IC_{50} of 92 ± 5 nM against ERAB or HADH2 (for a racemic mixture of the compound). The experimental data and co-crystal structue of the compound indicates that Compound I inhibits the ERAB or HADH2 via an interaction with NAD^+, which is the natural co-factor for ERAB or HADH2. This interaction with NAD^+ enables Compound I to bind ERAB or HADH2, approximately 1000-fold more potently than in the absence of NAD^+. Further, the tertiary structure analysis of the crystallized ERAB or HADH2:inhibitor complex shows that the inhibitor binds in the active site

cavity of the enzyme and reacts with the NAD^+ cofactor to form a covalent adduct (Figure 4C). The conformation and binding interactions of the inhibitor appear identical in the three ERAB or HADH2 monomers to which it binds in the crystal.

Referring to Figures 4A and 4C, the N2 nitrogen of the inhibitor is covalently linked to the reactive C4 carbon on the nicotinamide ring of the NAD^+. Adduct formation does not alter the conformation of the bound NAD^+ cofactor beyond movement of the C4 atom out of the plane of the nicotinamide ring. Consistent with the observed covalent binding, experiments using isothermal titration calorimetry demonstrate that the inhibitor binds weakly to ERAB or HADH2 in the absence of cofactor or in the presence of NADH (Fig. 5). No binding was detected when ERAB or HADH2 was titrated into either inhibitor or NAD^+ alone. A reaction was detected, however, when ERAB or HADH2 was titrated into an equimolar mixture of inhibitor and NAD^+. The data display the characteristics of a tight-binding curve involving one mole of ERAB or HADH2 per mole of inhibitor/NAD^+ mixture. The results obtained when ERAB or HADH2 was titrated into an equimolar mixture of inhibitor and NADH, on the other hand, are comparable to the results obtained when the protein was titrated into NADH alone. Similar results were observed using the C214R mutant of ERAB or HADH2. This observed reaction cannot simply be attributed to NAD^+ binding to ERAB or HADH2, as the Kd for NAD^+ was independently determined to be on the order of 500 uM. Therefore, a high cooperative binding of NAD^+ and inhibitor must account for the observed reaction. No significant cooperativity was observed for NADH binding in the presence of inhibitor. The formation of a covalent adduct apparently occurs because the inhibitor closely mimics the reaction stereochemistry of the substrate. A proposed mechanism for the reaction of Compound I with NAD^+ is shown in Figure 4C.

Despite a lack of structural similarity between Compound I and either of the ERAB or HADH2 substrates (wild-type or mutant), the inhibitor is in intimate contact with the protein within the substrate-binding cleft. A schematic representation of the protein-ligand interactions is shown in Figure 4D. The inhibitor contacts nine protein residues, primarily through hydrophobic interactions. Two hydrogen bonds are formed between Compound I and ERAB or HADH2, one between the OH of Tyr 168 and N1 of Compound I and the other between N_ε of Gln 165 and the carbonyl oxygen of Compound I. As mentioned previously, human 17β-hydroxysteroid dehydrogenase is a human protein closely related to ERAB or HADH2 whose structure has been reported (Ghosh et al., *Structure*, Vol. 3, pp. 503-513 (1995)). Likewise, 15-PGD and CAA20237.1, identified using the BLAST search engine (Altschul et al., *Nucleic Acids Research*, Vol. 25, pp. 3389-3402 (1997)), are two reported human sequences closely related to ERAB or HADH2 (see Figure 2). At most three of the nine residues that interact with the inhibitor are

found in any of these three related proteins. This uniqueness suggests that a high level of specificity may be attainable for ERAB or HADH2 inhibitors. Consistent with this, Compound I showed no detectable inhibition of two closely related members of the SDR family, *E. coli* 17β-hydroxysteroid dehydrogenase and *Streptomycetes hydrogenans* 3α-20β- hydroxysteroid dehydrogenase, at concentrations as high as 100 μM.

D. Crystallographic Analysis

The C214R mutant of ERAB or HADH2, made by the mutagenesis process described above, was engineered to avoid cysteine oxidation in the protein, with arginine selected as the replacement amino acid because of its occurrence at this position in other mammalian ERAB or HADH2 sequences (He et al., *Journal of Biochemistry* Vol. 273, pp. 10741-10746 (1998)). The C214R mutant of ERAB or HADH2 was concentrated to 20 mg/ml for crystallization. Five mM β-NAD and 5 mM Compound I were combined; and the precipitate removed by centrifugation. Initial thin plates were observed in Hampton Crystal Screen condition 40 (20% isopropanol, 20% PEG 4000, pH 5.6). The final conditions for crystal growth were 20% MME PEG 2000, 0.1 M Na citrate pH 6.0, 4% isopropanol. Nuclei were introduced to the drops by streak seeding [Stura et al., *Journal of Crystal Growth*, Vol.110, pp. 270 – 282 (1991)]. Single, thick plates grew over five days. Isopropanol, Tris, EDTA, glycerol and sodium citrate were all purchased from Fisher Scientific (Pittsburgh, PA). NaCl, β-mercaptoethanol, acetyl CoA, β-NAD^+ and MME PEG 2000 were from Sigma. PEG 400 was from BDH Laboratory Supplies (Poole, England). Crystal Screen and VDX plates were purchased from Hampton Research (Laguna Niguel, CA).

The results from the crystallographic analysis are shown in Table I below. Crystal coordinates are set forth in Table II.

Table I. Data Collection, Molecular Replacement, and Refinement Statistics

Crystal Information	
Space group	C2
Unit cell parameters c = 110.0 Å, β = 105.6°	a = 122.0 Å, b = 80.8 Å,
Estimated solvent content	50%
Data Collection	
Resolution	30.0-2.0 Å
Total observations	221,823
Unique reflections (completeness)	69,169 (99.4%)

Rsym	0.066
Molecular Replacement	
Program	EPMR
Data resolution range	15.0-4.0 Å
Solution correlation coefficient/R-factor	0.682 / 0.361
Refinement	
Resolution range	25.0-2.0 Å
Number of reflections	68595
Final R-factor (R-free)	0.215 (0.263)
Number of non-hydrogen atoms	
Protein	7224
NAD	176
Compound I	78
Water	282
Rms deviations from ideal geometry	
Bond lengths	0.005 Å
Bond angles	1.5°
Residues within most favored regions of Ramachandran plot	91.9%

Table II. Crystal coordinates of the ERAB or HADH2:Compound I complex

ATOM	1	CB	SER	A	7	51.735	12.841	30.482	1.000	22.48
ATOM	2	C	SER	A	7	53.935	12.748	29.330	1.000	44.59
ATOM	3	O	SER	A	7	53.965	12.623	28.111	1.000	43.24
ATOM	4	N	SER	A	7	52.577	14.801	29.231	1.000	59.99
ATOM	5	CA	SER	A	7	52.952	13.663	30.055	1.000	50.69
ATOM	6	N	VAL	A	8	54.749	12.075	30.131	1.000	39.56
ATOM	7	CA	VAL	A	8	55.600	11.010	29.608	1.000	36.12
ATOM	8	CB	VAL	A	8	56.868	10.859	30.460	1.000	38.89
ATOM	9	CG1	VAL	A	8	57.743	12.106	30.341	1.000	32.22
ATOM	10	CG2	VAL	A	8	56.501	10.596	31.916	1.000	29.19
ATOM	11	C	VAL	A	8	54.816	9.703	29.573	1.000	31.85
ATOM	12	O	VAL	A	8	55.319	8.694	29.085	1.000	33.39
ATOM	13	N	LYS	A	9	53.585	9.748	30.085	1.000	29.60
ATOM	14	CA	LYS	A	9	52.728	8.572	30.162	1.000	29.90
ATOM	15	CB	LYS	A	9	51.315	8.942	30.592	1.000	28.88
ATOM	16	C	LYS	A	9	52.675	7.826	28.833	1.000	31.95
ATOM	17	O	LYS	A	9	52.345	8.403	27.798	1.000	32.99
ATOM	18	N	GLY	A	10	53.024	6.543	28.880	1.000	33.00
ATOM	19	CA	GLY	A	10	53.013	5.713	27.696	1.000	32.38
ATOM	20	C	GLY	A	10	54.267	5.765	26.855	1.000	33.35
ATOM	21	O	GLY	A	10	54.439	4.954	25.937	1.000	38.54
ATOM	22	N	LEU	A	11	55.173	6.706	27.127	1.000	29.52
ATOM	23	CA	LEU	A	11	56.388	6.795	26.319	1.000	26.56
ATOM	24	CB	LEU	A	11	57.087	8.136	26.562	1.000	27.30
ATOM	25	CG	LEU	A	11	56.273	9.399	26.270	1.000	34.09
ATOM	26	CD1	LEU	A	11	57.138	10.635	26.489	1.000	37.47
ATOM	27	CD2	LEU	A	11	55.701	9.388	24.860	1.000	30.46
ATOM	28	C	LEU	A	11	57.340	5.641	26.619	1.000	25.91
ATOM	29	O	LEU	A	11	57.359	5.140	27.744	1.000	25.89
ATOM	30	N	VAL	A	12	58.113	5.236	25.611	1.000	24.21
ATOM	31	CA	VAL	A	12	59.120	4.198	25.754	1.000	24.85
ATOM	32	CB	VAL	A	12	59.025	3.133	24.644	1.000	27.51
ATOM	33	CG1	VAL	A	12	60.027	2.022	24.931	1.000	23.67
ATOM	34	CG2	VAL	A	12	57.620	2.569	24.502	1.000	27.54
ATOM	35	C	VAL	A	12	60.533	4.781	25.713	1.000	29.72
ATOM	36	O	VAL	A	12	60.961	5.327	24.691	1.000	28.03
ATOM	37	N	ALA	A	13	61.284	4.665	26.808	1.000	27.51
ATOM	38	CA	ALA	A	13	62.633	5.221	26.840	1.000	25.01
ATOM	39	CB	ALA	A	13	62.764	6.230	27.972	1.000	23.55
ATOM	40	C	ALA	A	13	63.709	4.156	26.996	1.000	26.59
ATOM	41	O	ALA	A	13	63.678	3.310	27.887	1.000	29.37
ATOM	42	N	VAL	A	14	64.702	4.209	26.111	1.000	22.79
ATOM	43	CA	VAL	A	14	65.894	3.371	26.286	1.000	23.38
ATOM	44	CB	VAL	A	14	66.418	2.828	24.955	1.000	24.29
ATOM	45	CG1	VAL	A	14	67.737	2.093	25.113	1.000	22.49
ATOM	46	CG2	VAL	A	14	65.376	1.889	24.355	1.000	24.04
ATOM	47	C	VAL	A	14	66.940	4.213	27.012	1.000	27.20
ATOM	48	O	VAL	A	14	67.350	5.258	26.513	1.000	25.93
ATOM	49	N	ILE	A	15	67.326	3.763	28.196	1.000	24.90
ATOM	50	CA	ILE	A	15	68.260	4.512	29.039	1.000	22.39
ATOM	51	CB	ILE	A	15	67.608	4.791	30.408	1.000	25.05
ATOM	52	CG2	ILE	A	15	68.514	5.626	31.295	1.000	24.50
ATOM	53	CG1	ILE	A	15	66.225	5.437	30.298	1.000	26.19
ATOM	54	CD1	ILE	A	15	65.483	5.627	31.601	1.000	29.49
ATOM	55	C	ILE	A	15	69.566	3.752	29.192	1.000	23.74
ATOM	56	O	ILE	A	15	69.630	2.729	29.877	1.000	22.94

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ATOM     57  N   THR A  16      70.629   4.224  28.535 1.000 23.34
ATOM     58  CA  THR A  16      71.921   3.555  28.681 1.000 22.89
ATOM     59  CB  THR A  16      72.884   3.870  27.528 1.000 21.08
ATOM     60  OG1 THR A  16      73.546   5.110  27.809 1.000 22.39
ATOM     61  CG2 THR A  16      72.116   4.034  26.222 1.000 18.21
ATOM     62  C   THR A  16      72.563   3.962  30.006 1.000 18.37
ATOM     63  O   THR A  16      72.328   5.085  30.456 1.000 22.95
ATOM     64  N   GLY A  17      73.338   3.053  30.591 1.000 22.86
ATOM     65  CA  GLY A  17      73.856   3.305  31.939 1.000 22.89
ATOM     66  C   GLY A  17      72.716   3.236  32.947 1.000 26.28
ATOM     67  O   GLY A  17      72.844   3.705  34.080 1.000 24.11
ATOM     68  N   GLY A  18      71.589   2.647  32.543 1.000 24.25
ATOM     69  CA  GLY A  18      70.398   2.613  33.367 1.000 22.22
ATOM     70  C   GLY A  18      70.476   1.749  34.607 1.000 23.39
ATOM     71  O   GLY A  18      69.530   1.757  35.401 1.000 25.11
ATOM     72  N   ALA A  19      71.533   0.981  34.851 1.000 22.33
ATOM     73  CA  ALA A  19      71.553   0.130  36.042 1.000 23.45
ATOM     74  CB  ALA A  19      72.441  -1.094  35.839 1.000 20.63
ATOM     75  C   ALA A  19      72.023   0.898  37.269 1.000 29.15
ATOM     76  O   ALA A  19      71.941   0.421  38.399 1.000 28.79
ATOM     77  N   SER A  20      72.534   2.110  37.069 1.000 25.73
ATOM     78  CA  SER A  20      73.135   2.829  38.192 1.000 24.12
ATOM     79  CB  SER A  20      74.627   2.487  38.237 1.000 25.36
ATOM     80  OG  SER A  20      75.308   3.189  39.253 1.000 28.39
ATOM     81  C   SER A  20      72.923   4.333  38.087 1.000 27.60
ATOM     82  O   SER A  20      72.555   4.843  37.025 1.000 25.39
ATOM     83  N   GLY A  21      73.151   5.015  39.199 1.000 25.28
ATOM     84  CA  GLY A  21      73.234   6.445  39.322 1.000 23.93
ATOM     85  C   GLY A  21      72.214   7.255  38.556 1.000 27.30
ATOM     86  O   GLY A  21      71.002   7.148  38.761 1.000 21.90
ATOM     87  N   LEU A  22      72.670   8.121  37.652 1.000 23.35
ATOM     88  CA  LEU A  22      71.727   9.032  36.990 1.000 22.33
ATOM     89  CB  LEU A  22      72.489  10.123  36.238 1.000 22.48
ATOM     90  CG  LEU A  22      73.530  10.891  37.065 1.000 20.02
ATOM     91  CD1 LEU A  22      74.242  11.934  36.220 1.000 17.51
ATOM     92  CD2 LEU A  22      72.873  11.552  38.269 1.000 19.27
ATOM     93  C   LEU A  22      70.776   8.278  36.072 1.000 21.31
ATOM     94  O   LEU A  22      69.584   8.600  36.033 1.000 25.91
ATOM     95  N   GLY A  23      71.288   7.281  35.346 1.000 23.21
ATOM     96  CA  GLY A  23      70.440   6.507  34.447 1.000 25.79
ATOM     97  C   GLY A  23      69.358   5.770  35.216 1.000 26.66
ATOM     98  O   GLY A  23      68.186   5.751  34.825 1.000 23.79
ATOM     99  N   LEU A  24      69.752   5.161  36.337 1.000 21.40
ATOM    100  CA  LEU A  24      68.777   4.449  37.166 1.000 20.59
ATOM    101  CB  LEU A  24      69.496   3.755  38.319 1.000 21.40
ATOM    102  CG  LEU A  24      68.626   3.074  39.371 1.000 23.90
ATOM    103  CD1 LEU A  24      67.775   1.976  38.757 1.000 22.46
ATOM    104  CD2 LEU A  24      69.525   2.526  40.475 1.000 25.95
ATOM    105  C   LEU A  24      67.690   5.366  37.705 1.000 22.12
ATOM    106  O   LEU A  24      66.516   5.001  37.707 1.000 25.08
ATOM    107  N   ALA A  25      68.066   6.552  38.171 1.000 23.29
ATOM    108  CA  ALA A  25      67.095   7.482  38.735 1.000 21.28
ATOM    109  CB  ALA A  25      67.803   8.645  39.410 1.000 21.52
ATOM    110  C   ALA A  25      66.146   7.995  37.657 1.000 25.16
ATOM    111  O   ALA A  25      64.967   8.241  37.885 1.000 26.05
ATOM    112  N   THR A  26      66.688   8.160  36.448 1.000 25.64
ATOM    113  CA  THR A  26      65.845   8.558  35.321 1.000 23.48
ATOM    114  CB  THR A  26      66.719   8.816  34.085 1.000 25.74
ATOM    115  OG1 THR A  26      67.686   9.832  34.416 1.000 22.48
ATOM    116  CG2 THR A  26      65.892   9.364  32.937 1.000 17.61
ATOM    117  C   THR A  26      64.794   7.490  35.055 1.000 21.52
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ATOM	118	O	THR	A	26	63.610	7.767	34.864	1.000	26.28
ATOM	119	N	ALA	A	27	65.226	6.236	35.064	1.000	20.21
ATOM	120	CA	ALA	A	27	64.316	5.109	34.921	1.000	25.18
ATOM	121	CB	ALA	A	27	65.121	3.818	34.862	1.000	25.77
ATOM	122	C	ALA	A	27	63.300	5.079	36.056	1.000	28.07
ATOM	123	O	ALA	A	27	62.098	4.897	35.838	1.000	26.17
ATOM	124	N	GLU	A	28	63.759	5.262	37.299	1.000	25.77
ATOM	125	CA	GLU	A	28	62.793	5.280	38.403	1.000	26.24
ATOM	126	CB	GLU	A	28	63.509	5.474	39.747	1.000	26.43
ATOM	127	CG	GLU	A	28	64.155	4.190	40.239	1.000	29.26
ATOM	128	CD	GLU	A	28	65.322	4.364	41.176	1.000	35.43
ATOM	129	OE1	GLU	A	28	65.845	3.327	41.641	1.000	39.79
ATOM	130	OE2	GLU	A	28	65.725	5.511	41.457	1.000	40.51
ATOM	131	C	GLU	A	28	61.736	6.353	38.200	1.000	29.60
ATOM	132	O	GLU	A	28	60.527	6.105	38.265	1.000	24.84
ATOM	133	N	ARG	A	29	62.157	7.589	37.935	1.000	24.83
ATOM	134	CA	ARG	A	29	61.176	8.661	37.772	1.000	26.33
ATOM	135	CB	ARG	A	29	61.908	9.991	37.560	1.000	23.24
ATOM	136	CG	ARG	A	29	61.039	11.130	37.078	1.000	24.21
ATOM	137	CD	ARG	A	29	61.639	12.485	37.398	1.000	25.40
ATOM	138	NE	ARG	A	29	60.559	13.482	37.422	1.000	27.67
ATOM	139	CZ	ARG	A	29	60.014	13.892	38.559	1.000	30.21
ATOM	140	NH1	ARG	A	29	59.042	14.791	38.527	1.000	31.45
ATOM	141	NH2	ARG	A	29	60.441	13.409	39.718	1.000	29.38
ATOM	142	C	ARG	A	29	60.210	8.405	36.620	1.000	29.14
ATOM	143	O	ARG	A	29	58.992	8.557	36.761	1.000	31.80
ATOM	144	N	LEU	A	30	60.749	8.024	35.461	1.000	25.02
ATOM	145	CA	LEU	A	30	59.880	7.864	34.295	1.000	27.73
ATOM	146	CB	LEU	A	30	60.700	7.667	33.017	1.000	26.81
ATOM	147	CG	LEU	A	30	61.602	8.837	32.602	1.000	25.95
ATOM	148	CD1	LEU	A	30	62.296	8.530	31.280	1.000	18.00
ATOM	149	CD2	LEU	A	30	60.832	10.141	32.501	1.000	25.79
ATOM	150	C	LEU	A	30	58.910	6.705	34.504	1.000	32.32
ATOM	151	O	LEU	A	30	57.707	6.857	34.261	1.000	32.24
ATOM	152	N	VAL	A	31	59.420	5.555	34.951	1.000	26.53
ATOM	153	CA	VAL	A	31	58.504	4.438	35.202	1.000	30.92
ATOM	154	CB	VAL	A	31	59.228	3.177	35.690	1.000	33.99
ATOM	155	CG1	VAL	A	31	58.227	2.141	36.183	1.000	41.79
ATOM	156	CG2	VAL	A	31	60.092	2.582	34.586	1.000	28.28
ATOM	157	C	VAL	A	31	57.465	4.884	36.228	1.000	32.60
ATOM	158	O	VAL	A	31	56.271	4.603	36.133	1.000	35.28
ATOM	159	N	GLY	A	32	57.937	5.637	37.219	1.000	26.54
ATOM	160	CA	GLY	A	32	57.041	6.213	38.209	1.000	28.51
ATOM	161	C	GLY	A	32	56.043	7.178	37.602	1.000	35.42
ATOM	162	O	GLY	A	32	54.960	7.376	38.160	1.000	31.39
ATOM	163	N	GLN	A	33	56.387	7.791	36.470	1.000	36.54
ATOM	164	CA	GLN	A	33	55.470	8.735	35.835	1.000	35.97
ATOM	165	CB	GLN	A	33	56.251	9.946	35.304	1.000	39.48
ATOM	166	CG	GLN	A	33	56.931	10.759	36.395	1.000	44.03
ATOM	167	CD	GLN	A	33	55.975	11.701	37.105	1.000	48.53
ATOM	168	OE1	GLN	A	33	55.142	12.349	36.469	1.000	57.31
ATOM	169	NE2	GLN	A	33	56.073	11.773	38.426	1.000	58.52
ATOM	170	C	GLN	A	33	54.666	8.107	34.708	1.000	33.10
ATOM	171	O	GLN	A	33	54.151	8.809	33.835	1.000	32.11
ATOM	172	N	GLY	A	34	54.548	6.786	34.698	1.000	30.58
ATOM	173	CA	GLY	A	34	53.759	6.081	33.712	1.000	30.35
ATOM	174	C	GLY	A	34	54.465	5.672	32.444	1.000	33.61
ATOM	175	O	GLY	A	34	53.842	5.118	31.529	1.000	32.81
ATOM	176	N	ALA	A	35	55.769	5.914	32.316	1.000	29.29
ATOM	177	CA	ALA	A	35	56.477	5.513	31.103	1.000	24.74
ATOM	178	CB	ALA	A	35	57.603	6.507	30.811	1.000	25.46

ATOM	179	C	ALA	A	35	57.043	4.110	31.214	1.000	25.25
ATOM	180	O	ALA	A	35	57.104	3.509	32.287	1.000	29.96
ATOM	181	N	SER	A	36	57.502	3.540	30.094	1.000	24.78
ATOM	182	CA	SER	A	36	58.197	2.255	30.188	1.000	29.92
ATOM	183	CB	SER	A	36	57.665	1.248	29.173	1.000	29.14
ATOM	184	OG	SER	A	36	56.246	1.180	29.229	1.000	34.85
ATOM	185	C	SER	A	36	59.693	2.474	29.987	1.000	34.68
ATOM	186	O	SER	A	36	60.112	3.339	29.199	1.000	29.89
ATOM	187	N	ALA	A	37	60.520	1.704	30.699	1.000	29.94
ATOM	188	CA	ALA	A	37	61.956	1.937	30.534	1.000	29.90
ATOM	189	CB	ALA	A	37	62.525	2.620	31.769	1.000	27.09
ATOM	190	C	ALA	A	37	62.702	0.647	30.219	1.000	26.26
ATOM	191	O	ALA	A	37	62.390	-0.426	30.728	1.000	32.04
ATOM	192	N	VAL	A	38	63.695	0.788	29.354	1.000	23.68
ATOM	193	CA	VAL	A	38	64.637	-0.263	29.023	1.000	22.95
ATOM	194	CB	VAL	A	38	64.811	-0.441	27.504	1.000	25.74
ATOM	195	CG1	VAL	A	38	65.856	-1.513	27.223	1.000	24.56
ATOM	196	CG2	VAL	A	38	63.491	-0.774	26.830	1.000	32.06
ATOM	197	C	VAL	A	38	65.997	0.093	29.617	1.000	28.45
ATOM	198	O	VAL	A	38	66.594	1.082	29.173	1.000	26.25
ATOM	199	N	LEU	A	39	66.491	-0.659	30.600	1.000	27.75
ATOM	200	CA	LEU	A	39	67.800	-0.311	31.164	1.000	25.11
ATOM	201	CB	LEU	A	39	67.947	-0.783	32.608	1.000	24.71
ATOM	202	CG	LEU	A	39	66.802	-0.447	33.563	1.000	22.78
ATOM	203	CD1	LEU	A	39	67.098	-0.949	34.969	1.000	22.70
ATOM	204	CD2	LEU	A	39	66.523	1.047	33.573	1.000	21.30
ATOM	205	C	LEU	A	39	68.904	-0.910	30.305	1.000	25.85
ATOM	206	O	LEU	A	39	69.165	-2.113	30.378	1.000	29.36
ATOM	207	N	LEU	A	40	69.548	-0.085	29.480	1.000	24.69
ATOM	208	CA	LEU	A	40	70.644	-0.615	28.655	1.000	22.81
ATOM	209	CB	LEU	A	40	70.642	0.066	27.298	1.000	19.59
ATOM	210	CG	LEU	A	40	71.463	-0.528	26.158	1.000	25.17
ATOM	211	CD1	LEU	A	40	70.956	-0.022	24.814	1.000	27.01
ATOM	212	CD2	LEU	A	40	72.940	-0.191	26.275	1.000	26.56
ATOM	213	C	LEU	A	40	71.962	-0.442	29.410	1.000	26.53
ATOM	214	O	LEU	A	40	72.434	0.664	29.672	1.000	25.35
ATOM	215	N	ASP	A	41	72.575	-1.561	29.783	1.000	28.32
ATOM	216	CA	ASP	A	41	73.804	-1.500	30.579	1.000	27.97
ATOM	217	CB	ASP	A	41	73.454	-1.175	32.031	1.000	21.96
ATOM	218	CG	ASP	A	41	74.535	-0.431	32.778	1.000	27.64
ATOM	219	OD1	ASP	A	41	75.708	-0.851	32.693	1.000	27.85
ATOM	220	OD2	ASP	A	41	74.235	0.571	33.459	1.000	25.29
ATOM	221	C	ASP	A	41	74.559	-2.815	30.443	1.000	28.71
ATOM	222	O	ASP	A	41	74.000	-3.774	29.901	1.000	26.54
ATOM	223	N	LEU	A	42	75.795	-2.879	30.910	1.000	26.54
ATOM	224	CA	LEU	A	42	76.641	-4.055	30.732	1.000	28.04
ATOM	225	CB	LEU	A	42	78.055	-3.751	31.262	1.000	27.78
ATOM	226	CG	LEU	A	42	78.868	-2.727	30.459	1.000	29.86
ATOM	227	CD1	LEU	A	42	80.180	-2.423	31.172	1.000	26.34
ATOM	228	CD2	LEU	A	42	79.126	-3.212	29.043	1.000	18.86
ATOM	229	C	LEU	A	42	76.098	-5.293	31.423	1.000	26.58
ATOM	230	O	LEU	A	42	75.344	-5.204	32.392	1.000	23.94
ATOM	231	N	PRO	A	43	76.468	-6.473	30.947	1.000	30.41
ATOM	232	CD	PRO	A	43	77.291	-6.725	29.753	1.000	31.03
ATOM	233	CA	PRO	A	43	76.042	-7.716	31.593	1.000	32.05
ATOM	234	CB	PRO	A	43	76.767	-8.808	30.796	1.000	29.32
ATOM	235	CG	PRO	A	43	77.035	-8.184	29.469	1.000	32.03
ATOM	236	C	PRO	A	43	76.484	-7.799	33.046	1.000	33.41
ATOM	237	O	PRO	A	43	75.756	-8.304	33.911	1.000	37.54
ATOM	238	N	ASN	A	44	77.685	-7.316	33.356	1.000	31.95
ATOM	239	CA	ASN	A	44	78.146	-7.453	34.744	1.000	40.41

ATOM	240	CB	ASN	A	44	79.668	-7.347	34.827	1.000	49.11
ATOM	241	CG	ASN	A	44	80.196	-6.236	33.938	1.000	55.31
ATOM	242	OD1	ASN	A	44	80.617	-6.491	32.805	1.000	69.12
ATOM	243	ND2	ASN	A	44	80.167	-5.006	34.446	1.000	62.20
ATOM	244	C	ASN	A	44	77.490	-6.415	35.636	1.000	38.34
ATOM	245	O	ASN	A	44	77.624	-6.435	36.861	1.000	41.33
ATOM	246	N	SER	A	45	76.741	-5.475	35.053	1.000	35.28
ATOM	247	CA	SER	A	45	76.052	-4.530	35.939	1.000	32.87
ATOM	248	CB	SER	A	45	75.622	-3.278	35.188	1.000	31.87
ATOM	249	OG	SER	A	45	74.642	-3.582	34.212	1.000	29.60
ATOM	250	C	SER	A	45	74.863	-5.241	36.578	1.000	37.42
ATOM	251	O	SER	A	45	74.533	-6.370	36.209	1.000	64.40
ATOM	252	N	GLY	A	46	74.217	-4.587	37.537	1.000	34.25
ATOM	253	CA	GLY	A	46	73.055	-5.178	38.181	1.000	31.85
ATOM	254	C	GLY	A	46	71.759	-4.755	37.526	1.000	30.67
ATOM	255	O	GLY	A	46	70.729	-4.609	38.193	1.000	33.01
ATOM	256	N	GLY	A	47	71.756	-4.541	36.209	1.000	29.41
ATOM	257	CA	GLY	A	47	70.527	-4.137	35.549	1.000	30.70
ATOM	258	C	GLY	A	47	69.377	-5.097	35.791	1.000	33.15
ATOM	259	O	GLY	A	47	68.247	-4.677	36.065	1.000	31.89
ATOM	260	N	GLU	A	48	69.659	-6.397	35.698	1.000	32.03
ATOM	261	CA	GLU	A	48	68.588	-7.391	35.804	1.000	31.42
ATOM	262	CB	GLU	A	48	69.127	-8.815	35.682	1.000	37.80
ATOM	263	CG	GLU	A	48	68.132	-9.893	35.337	1.000	47.30
ATOM	264	CD	GLU	A	48	66.763	-9.448	34.885	1.000	58.32
ATOM	265	OE1	GLU	A	48	65.804	-9.621	35.670	1.000	65.85
ATOM	266	OE2	GLU	A	48	66.612	-8.930	33.758	1.000	70.00
ATOM	267	C	GLU	A	48	67.846	-7.239	37.118	1.000	30.92
ATOM	268	O	GLU	A	48	66.617	-7.218	37.178	1.000	36.04
ATOM	269	N	ALA	A	49	68.606	-7.117	38.205	1.000	31.19
ATOM	270	CA	ALA	A	49	67.948	-6.896	39.494	1.000	31.65
ATOM	271	CB	ALA	A	49	68.978	-7.001	40.610	1.000	31.46
ATOM	272	C	ALA	A	49	67.228	-5.557	39.519	1.000	30.98
ATOM	273	O	ALA	A	49	66.139	-5.435	40.085	1.000	27.23
ATOM	274	N	GLN	A	50	67.816	-4.515	38.920	1.000	29.45
ATOM	275	CA	GLN	A	50	67.152	-3.211	38.984	1.000	26.50
ATOM	276	CB	GLN	A	50	68.110	-2.104	38.549	1.000	26.43
ATOM	277	CG	GLN	A	50	69.247	-1.827	39.512	1.000	26.86
ATOM	278	CD	GLN	A	50	68.821	-1.263	40.853	1.000	31.76
ATOM	279	OE1	GLN	A	50	69.636	-1.155	41.777	1.000	48.35
ATOM	280	NE2	GLN	A	50	67.557	-0.892	41.009	1.000	25.67
ATOM	281	C	GLN	A	50	65.893	-3.202	38.123	1.000	26.83
ATOM	282	O	GLN	A	50	64.914	-2.541	38.469	1.000	28.11
ATOM	283	N	ALA	A	51	65.919	-3.926	37.003	1.000	26.24
ATOM	284	CA	ALA	A	51	64.730	-4.022	36.163	1.000	29.19
ATOM	285	CB	ALA	A	51	65.064	-4.714	34.851	1.000	29.30
ATOM	286	C	ALA	A	51	63.604	-4.759	36.880	1.000	31.69
ATOM	287	O	ALA	A	51	62.434	-4.410	36.725	1.000	29.70
ATOM	288	CB	LYS	A	52	63.436	-7.768	39.045	1.000	39.33
ATOM	289	C	LYS	A	52	62.289	-5.597	39.496	1.000	32.07
ATOM	290	O	LYS	A	52	61.074	-5.564	39.705	1.000	31.48
ATOM	291	N	LYS	A	52	63.934	-5.779	37.666	1.000	31.15
ATOM	292	CA	LYS	A	52	62.895	-6.487	38.421	1.000	33.63
ATOM	293	N	LYS	A	53	63.132	-4.849	40.206	1.000	31.94
ATOM	294	CA	LYS	A	53	62.646	-3.936	41.231	1.000	33.54
ATOM	295	CB	LYS	A	53	63.805	-3.177	41.871	1.000	35.96
ATOM	296	CG	LYS	A	53	64.746	-3.962	42.758	1.000	43.20
ATOM	297	CD	LYS	A	53	65.258	-3.055	43.877	1.000	49.44
ATOM	298	CE	LYS	A	53	64.198	-2.022	44.244	1.000	50.60
ATOM	299	NZ	LYS	A	53	64.784	-0.830	44.919	1.000	60.33
ATOM	300	C	LYS	A	53	61.671	-2.908	40.672	1.000	36.81

ATOM	301	O	LYS	A	53	60.745	-2.481	41.369	1.000	40.69
ATOM	302	N	LEU	A	54	61.855	-2.468	39.423	1.000	35.85
ATOM	303	CA	LEU	A	54	61.021	-1.353	38.960	1.000	32.59
ATOM	304	CB	LEU	A	54	61.779	-0.549	37.886	1.000	28.86
ATOM	305	CG	LEU	A	54	62.665	0.555	38.491	1.000	30.10
ATOM	306	CD1	LEU	A	54	63.603	1.152	37.459	1.000	29.65
ATOM	307	CD2	LEU	A	54	61.779	1.617	39.126	1.000	29.77
ATOM	308	C	LEU	A	54	59.660	-1.797	38.457	1.000	31.24
ATOM	309	O	LEU	A	54	58.766	-0.954	38.352	1.000	39.12
ATOM	310	N	GLY	A	55	59.484	-3.081	38.163	1.000	34.66
ATOM	311	CA	GLY	A	55	58.174	-3.601	37.829	1.000	29.84
ATOM	312	C	GLY	A	55	58.004	-4.016	36.387	1.000	30.24
ATOM	313	O	GLY	A	55	58.972	-4.176	35.645	1.000	27.18
ATOM	314	N	ASN	A	56	56.747	-4.198	35.985	1.000	32.93
ATOM	315	CA	ASN	A	56	56.409	-4.664	34.650	1.000	38.74
ATOM	316	CB	ASN	A	56	54.896	-4.906	34.554	1.000	45.27
ATOM	317	CG	ASN	A	56	54.475	-6.105	35.376	1.000	52.39
ATOM	318	OD1	ASN	A	56	53.386	-6.091	35.948	1.000	62.55
ATOM	319	ND2	ASN	A	56	55.334	-7.116	35.417	1.000	51.01
ATOM	320	C	ASN	A	56	56.802	-3.691	33.548	1.000	36.08
ATOM	321	O	ASN	A	56	56.989	-4.108	32.400	1.000	37.33
ATOM	322	N	ASN	A	57	56.905	-2.405	33.885	1.000	35.54
ATOM	323	CA	ASN	A	57	57.123	-1.426	32.816	1.000	34.82
ATOM	324	CB	ASN	A	57	56.314	-0.156	33.089	1.000	33.64
ATOM	325	CG	ASN	A	57	54.817	-0.410	33.105	1.000	38.38
ATOM	326	OD1	ASN	A	57	54.099	0.174	33.917	1.000	46.58
ATOM	327	ND2	ASN	A	57	54.352	-1.283	32.219	1.000	39.66
ATOM	328	C	ASN	A	57	58.601	-1.096	32.641	1.000	35.06
ATOM	329	O	ASN	A	57	58.952	-0.061	32.068	1.000	29.66
ATOM	330	N	CYS	A	58	59.463	-1.981	33.132	1.000	32.26
ATOM	331	CA	CYS	A	58	60.908	-1.788	33.018	1.000	31.63
ATOM	332	CB	CYS	A	58	61.453	-1.136	34.299	1.000	30.13
ATOM	333	SG	CYS	A	58	63.247	-0.942	34.332	1.000	30.84
ATOM	334	C	CYS	A	58	61.636	-3.094	32.749	1.000	28.19
ATOM	335	O	CYS	A	58	61.469	-4.089	33.455	1.000	31.62
ATOM	336	N	VAL	A	59	62.479	-3.139	31.716	1.000	29.67
ATOM	337	CA	VAL	A	59	63.231	-4.367	31.450	1.000	27.92
ATOM	338	CB	VAL	A	59	62.717	-5.090	30.193	1.000	34.40
ATOM	339	CG1	VAL	A	59	61.194	-5.189	30.205	1.000	35.21
ATOM	340	CG2	VAL	A	59	63.186	-4.379	28.931	1.000	33.09
ATOM	341	C	VAL	A	59	64.720	-4.068	31.305	1.000	30.47
ATOM	342	O	VAL	A	59	65.109	-2.914	31.099	1.000	30.32
ATOM	343	N	PHE	A	60	65.540	-5.106	31.414	1.000	28.13
ATOM	344	CA	PHE	A	60	66.984	-4.984	31.257	1.000	27.53
ATOM	345	CB	PHE	A	60	67.699	-5.719	32.386	1.000	26.77
ATOM	346	CG	PHE	A	60	69.197	-5.879	32.228	1.000	29.40
ATOM	347	CD1	PHE	A	60	70.027	-4.793	32.017	1.000	30.82
ATOM	348	CD2	PHE	A	60	69.775	-7.134	32.295	1.000	30.46
ATOM	349	CE1	PHE	A	60	71.391	-4.955	31.880	1.000	28.83
ATOM	350	CE2	PHE	A	60	71.144	-7.301	32.157	1.000	28.61
ATOM	351	CZ	PHE	A	60	71.963	-6.211	31.948	1.000	26.40
ATOM	352	C	PHE	A	60	67.430	-5.520	29.900	1.000	31.03
ATOM	353	O	PHE	A	60	67.112	-6.641	29.507	1.000	28.03
ATOM	354	N	ALA	A	61	68.183	-4.708	29.165	1.000	29.19
ATOM	355	CA	ALA	A	61	68.787	-5.142	27.909	1.000	25.43
ATOM	356	CB	ALA	A	61	68.346	-4.273	26.748	1.000	28.07
ATOM	357	C	ALA	A	61	70.306	-5.101	28.044	1.000	28.34
ATOM	358	O	ALA	A	61	70.876	-4.007	28.104	1.000	32.03
ATOM	359	N	PRO	A	62	70.940	-6.263	28.112	1.000	30.23
ATOM	360	CD	PRO	A	62	70.344	-7.605	28.031	1.000	27.38
ATOM	361	CA	PRO	A	62	72.397	-6.292	28.287	1.000	29.81

ATOM	362	CB	PRO	A	62	72.692	-7.775	28.525	1.000	28.87
ATOM	363	CG	PRO	A	62	71.543	-8.503	27.920	1.000	28.71
ATOM	364	C	PRO	A	62	73.114	-5.792	27.042	1.000	29.91
ATOM	365	O	PRO	A	62	72.857	-6.253	25.926	1.000	31.43
ATOM	366	N	ALA	A	63	74.026	-4.836	27.200	1.000	26.31
ATOM	367	CA	ALA	A	63	74.725	-4.334	26.017	1.000	27.56
ATOM	368	CB	ALA	A	63	73.754	-3.643	25.064	1.000	24.43
ATOM	369	C	ALA	A	63	75.845	-3.363	26.369	1.000	23.71
ATOM	370	O	ALA	A	63	75.730	-2.583	27.305	1.000	27.32
ATOM	371	N	ASP	A	64	76.910	-3.416	25.594	1.000	24.90
ATOM	372	CA	ASP	A	64	78.039	-2.504	25.601	1.000	27.05
ATOM	373	CB	ASP	A	64	79.335	-3.280	25.359	1.000	24.11
ATOM	374	CG	ASP	A	64	80.575	-2.425	25.459	1.000	27.69
ATOM	375	OD1	ASP	A	64	81.672	-2.969	25.700	1.000	32.95
ATOM	376	OD2	ASP	A	64	80.481	-1.188	25.299	1.000	29.28
ATOM	377	C	ASP	A	64	77.816	-1.455	24.513	1.000	26.63
ATOM	378	O	ASP	A	64	77.682	-1.864	23.353	1.000	23.13
ATOM	379	N	VAL	A	65	77.773	-0.175	24.870	1.000	28.62
ATOM	380	CA	VAL	A	65	77.445	0.878	23.913	1.000	25.22
ATOM	381	CB	VAL	A	65	77.169	2.252	24.562	1.000	22.72
ATOM	382	CG1	VAL	A	65	75.934	2.199	25.445	1.000	19.07
ATOM	383	CG2	VAL	A	65	78.382	2.737	25.354	1.000	22.83
ATOM	384	C	VAL	A	65	78.545	1.085	22.882	1.000	22.70
ATOM	385	O	VAL	A	65	78.316	1.783	21.891	1.000	26.47
ATOM	386	N	THR	A	66	79.731	0.513	23.074	1.000	21.37
ATOM	387	CA	THR	A	66	80.742	0.660	22.027	1.000	23.63
ATOM	388	CB	THR	A	66	82.175	0.536	22.576	1.000	26.03
ATOM	389	OG1	THR	A	66	82.330	-0.756	23.182	1.000	28.93
ATOM	390	CG2	THR	A	66	82.437	1.562	23.658	1.000	26.52
ATOM	391	C	THR	A	66	80.567	-0.391	20.934	1.000	27.05
ATOM	392	O	THR	A	66	81.322	-0.413	19.966	1.000	27.67
ATOM	393	N	SER	A	67	79.588	-1.273	21.068	1.000	28.37
ATOM	394	CA	SER	A	67	79.390	-2.367	20.128	1.000	27.49
ATOM	395	CB	SER	A	67	79.300	-3.686	20.904	1.000	23.12
ATOM	396	OG	SER	A	67	78.456	-4.607	20.235	1.000	28.63
ATOM	397	C	SER	A	67	78.143	-2.202	19.266	1.000	27.54
ATOM	398	O	SER	A	67	77.027	-2.082	19.789	1.000	28.72
ATOM	399	N	GLU	A	68	78.325	-2.214	17.942	1.000	27.74
ATOM	400	CA	GLU	A	68	77.192	-2.102	17.028	1.000	29.78
ATOM	401	CB	GLU	A	68	77.652	-2.183	15.560	1.000	30.35
ATOM	402	CG	GLU	A	68	76.501	-1.980	14.588	1.000	33.75
ATOM	403	CD	GLU	A	68	76.933	-1.791	13.150	1.000	37.21
ATOM	404	OE1	GLU	A	68	77.152	-0.638	12.731	1.000	36.37
ATOM	405	OE2	GLU	A	68	77.055	-2.805	12.432	1.000	44.18
ATOM	406	C	GLU	A	68	76.153	-3.186	17.271	1.000	27.83
ATOM	407	O	GLU	A	68	74.964	-2.915	17.443	1.000	26.11
ATOM	408	CB	LYS	A	69	76.372	-6.876	17.184	1.000	34.15
ATOM	409	C	LYS	A	69	74.896	-5.512	18.692	1.000	29.20
ATOM	410	O	LYS	A	69	73.680	-5.745	18.740	1.000	28.05
ATOM	411	N	LYS	A	69	76.601	-4.442	17.264	1.000	24.54
ATOM	412	CA	LYS	A	69	75.653	-5.551	17.369	1.000	27.59
ATOM	413	N	ASP	A	70	75.589	-5.223	19.791	1.000	26.28
ATOM	414	CA	ASP	A	70	74.905	-5.189	21.085	1.000	28.59
ATOM	415	CB	ASP	A	70	75.891	-4.867	22.211	1.000	30.01
ATOM	416	CG	ASP	A	70	76.714	-6.064	22.626	1.000	30.41
ATOM	417	OD1	ASP	A	70	76.556	-7.136	22.014	1.000	32.46
ATOM	418	OD2	ASP	A	70	77.520	-5.919	23.568	1.000	31.67
ATOM	419	C	ASP	A	70	73.785	-4.161	21.118	1.000	25.48
ATOM	420	O	ASP	A	70	72.673	-4.412	21.582	1.000	28.32
ATOM	421	N	VAL	A	71	74.102	-2.962	20.614	1.000	27.50
ATOM	422	CA	VAL	A	71	73.073	-1.917	20.648	1.000	25.54

ATOM	423	CB	VAL	A	71	73.667	-0.550	20.280	1.000	25.70
ATOM	424	CG1	VAL	A	71	72.592	0.519	20.166	1.000	23.17
ATOM	425	CG2	VAL	A	71	74.711	-0.143	21.315	1.000	27.59
ATOM	426	C	VAL	A	71	71.932	-2.316	19.723	1.000	25.05
ATOM	427	O	VAL	A	71	70.750	-2.147	20.019	1.000	26.83
ATOM	428	N	GLN	A	72	72.293	-2.883	18.574	1.000	24.81
ATOM	429	CA	GLN	A	72	71.261	-3.431	17.693	1.000	29.31
ATOM	430	CB	GLN	A	72	71.918	-4.055	16.465	1.000	28.74
ATOM	431	CG	GLN	A	72	72.472	-3.031	15.482	1.000	30.16
ATOM	432	CD	GLN	A	72	73.120	-3.697	14.283	1.000	36.36
ATOM	433	OE1	GLN	A	72	73.821	-4.699	14.442	1.000	43.12
ATOM	434	NE2	GLN	A	72	72.895	-3.153	13.093	1.000	40.74
ATOM	435	C	GLN	A	72	70.418	-4.454	18.439	1.000	26.93
ATOM	436	O	GLN	A	72	69.191	-4.448	18.377	1.000	30.79
ATOM	437	N	THR	A	73	71.069	-5.359	19.173	1.000	26.15
ATOM	438	CA	THR	A	73	70.306	-6.375	19.901	1.000	30.40
ATOM	439	CB	THR	A	73	71.227	-7.417	20.561	1.000	37.27
ATOM	440	OG1	THR	A	73	72.116	-7.998	19.599	1.000	36.22
ATOM	441	CG2	THR	A	73	70.393	-8.571	21.103	1.000	35.78
ATOM	442	C	THR	A	73	69.410	-5.755	20.963	1.000	32.05
ATOM	443	O	THR	A	73	68.253	-6.130	21.181	1.000	36.06
ATOM	444	N	ALA	A	74	69.935	-4.759	21.681	1.000	27.56
ATOM	445	CA	ALA	A	74	69.125	-4.130	22.719	1.000	23.23
ATOM	446	CB	ALA	A	74	70.014	-3.240	23.579	1.000	27.20
ATOM	447	C	ALA	A	74	67.975	-3.327	22.143	1.000	27.14
ATOM	448	O	ALA	A	74	66.920	-3.170	22.769	1.000	32.32
ATOM	449	N	LEU	A	75	68.124	-2.755	20.943	1.000	27.14
ATOM	450	CA	LEU	A	75	67.004	-1.940	20.453	1.000	27.09
ATOM	451	CB	LEU	A	75	67.496	-1.012	19.342	1.000	27.14
ATOM	452	CG	LEU	A	75	68.362	0.157	19.824	1.000	26.32
ATOM	453	CD1	LEU	A	75	68.833	1.022	18.667	1.000	27.27
ATOM	454	CD2	LEU	A	75	67.602	1.004	20.836	1.000	23.37
ATOM	455	C	LEU	A	75	65.856	-2.839	20.007	1.000	26.19
ATOM	456	O	LEU	A	75	64.673	-2.555	20.198	1.000	26.12
ATOM	457	N	ALA	A	76	66.226	-3.955	19.394	1.000	28.48
ATOM	458	CA	ALA	A	76	65.291	-4.987	18.974	1.000	32.72
ATOM	459	CB	ALA	A	76	66.033	-6.067	18.194	1.000	30.42
ATOM	460	C	ALA	A	76	64.584	-5.562	20.191	1.000	36.42
ATOM	461	O	ALA	A	76	63.386	-5.845	20.160	1.000	35.82
ATOM	462	N	LEU	A	77	65.323	-5.733	21.287	1.000	34.58
ATOM	463	CA	LEU	A	77	64.675	-6.174	22.526	1.000	30.05
ATOM	464	CB	LEU	A	77	65.706	-6.374	23.633	1.000	32.29
ATOM	465	CG	LEU	A	77	65.256	-6.961	24.965	1.000	35.67
ATOM	466	CD1	LEU	A	77	66.370	-7.768	25.618	1.000	39.63
ATOM	467	CD2	LEU	A	77	64.799	-5.868	25.922	1.000	31.59
ATOM	468	C	LEU	A	77	63.621	-5.149	22.927	1.000	32.17
ATOM	469	O	LEU	A	77	62.499	-5.499	23.299	1.000	35.79
ATOM	470	N	ALA	A	78	64.007	-3.875	22.853	1.000	29.62
ATOM	471	CA	ALA	A	78	63.101	-2.822	23.307	1.000	32.17
ATOM	472	CB	ALA	A	78	63.822	-1.483	23.336	1.000	32.12
ATOM	473	C	ALA	A	78	61.849	-2.748	22.447	1.000	30.46
ATOM	474	O	ALA	A	78	60.731	-2.575	22.946	1.000	30.23
ATOM	475	N	LYS	A	79	62.013	-2.876	21.133	1.000	33.18
ATOM	476	CA	LYS	A	79	60.833	-2.810	20.266	1.000	36.74
ATOM	477	CB	LYS	A	79	61.245	-2.779	18.804	1.000	33.27
ATOM	478	C	LYS	A	79	59.908	-3.987	20.553	1.000	38.51
ATOM	479	O	LYS	A	79	58.725	-3.833	20.865	1.000	37.04
ATOM	480	N	GLY	A	80	60.457	-5.196	20.455	1.000	38.59
ATOM	481	CA	GLY	A	80	59.683	-6.401	20.700	1.000	40.57
ATOM	482	C	GLY	A	80	58.971	-6.362	22.035	1.000	42.68
ATOM	483	O	GLY	A	80	57.842	-6.835	22.193	1.000	43.09

ATOM	484	N	LYS	A	81	59.614	-5.779	23.052	1.000	37.05
ATOM	485	CA	LYS	A	81	58.951	-5.799	24.356	1.000	34.36
ATOM	486	CB	LYS	A	81	59.988	-5.738	25.482	1.000	39.59
ATOM	487	CG	LYS	A	81	59.370	-5.571	26.863	1.000	47.54
ATOM	488	CD	LYS	A	81	58.961	-6.918	27.443	1.000	53.39
ATOM	489	CE	LYS	A	81	57.911	-6.741	28.529	1.000	57.33
ATOM	490	NZ	LYS	A	81	57.931	-7.873	29.500	1.000	62.03
ATOM	491	C	LYS	A	81	57.947	-4.670	24.506	1.000	35.60
ATOM	492	O	LYS	A	81	56.870	-4.863	25.069	1.000	33.46
ATOM	493	N	PHE	A	82	58.271	-3.472	24.015	1.000	32.89
ATOM	494	CA	PHE	A	82	57.382	-2.357	24.335	1.000	31.56
ATOM	495	CB	PHE	A	82	58.129	-1.303	25.161	1.000	34.84
ATOM	496	CG	PHE	A	82	58.418	-1.752	26.585	1.000	33.59
ATOM	497	CD1	PHE	A	82	57.406	-2.221	27.406	1.000	31.18
ATOM	498	CD2	PHE	A	82	59.712	-1.693	27.081	1.000	30.71
ATOM	499	CE1	PHE	A	82	57.690	-2.623	28.698	1.000	34.47
ATOM	500	CE2	PHE	A	82	60.002	-2.097	28.371	1.000	30.31
ATOM	501	CZ	PHE	A	82	58.987	-2.563	29.185	1.000	33.43
ATOM	502	C	PHE	A	82	56.760	-1.710	23.107	1.000	33.34
ATOM	503	O	PHE	A	82	55.969	-0.783	23.304	1.000	35.24
ATOM	504	N	GLY	A	83	57.098	-2.188	21.916	1.000	35.59
ATOM	505	CA	GLY	A	83	56.424	-1.757	20.707	1.000	37.30
ATOM	506	C	GLY	A	83	57.132	-0.690	19.906	1.000	40.28
ATOM	507	O	GLY	A	83	57.141	-0.747	18.668	1.000	38.84
ATOM	508	N	ARG	A	84	57.724	0.292	20.573	1.000	36.22
ATOM	509	CA	ARG	A	84	58.472	1.354	19.917	1.000	33.53
ATOM	510	CB	ARG	A	84	57.523	2.420	19.371	1.000	28.51
ATOM	511	CG	ARG	A	84	56.638	3.117	20.390	1.000	34.98
ATOM	512	CD	ARG	A	84	56.394	4.574	20.015	1.000	44.46
ATOM	513	NE	ARG	A	84	55.513	4.720	18.871	1.000	52.06
ATOM	514	CZ	ARG	A	84	55.176	5.811	18.208	1.000	56.54
ATOM	515	NH1	ARG	A	84	54.338	5.706	17.176	1.000	63.82
ATOM	516	NH2	ARG	A	84	55.641	7.015	18.527	1.000	33.88
ATOM	517	C	ARG	A	84	59.483	1.978	20.882	1.000	34.32
ATOM	518	O	ARG	A	84	59.515	1.588	22.052	1.000	37.33
ATOM	519	N	VAL	A	85	60.264	2.925	20.388	1.000	28.25
ATOM	520	CA	VAL	A	85	61.157	3.768	21.179	1.000	26.10
ATOM	521	CB	VAL	A	85	62.635	3.482	20.862	1.000	28.04
ATOM	522	CG1	VAL	A	85	63.551	4.419	21.629	1.000	28.94
ATOM	523	CG2	VAL	A	85	62.983	2.037	21.191	1.000	24.86
ATOM	524	C	VAL	A	85	60.849	5.242	20.922	1.000	26.87
ATOM	525	O	VAL	A	85	60.849	5.696	19.775	1.000	28.91
ATOM	526	N	ASP	A	86	60.565	5.994	21.974	1.000	27.02
ATOM	527	CA	ASP	A	86	60.191	7.394	21.880	1.000	25.13
ATOM	528	CB	ASP	A	86	58.914	7.687	22.679	1.000	26.20
ATOM	529	CG	ASP	A	86	57.755	6.817	22.227	1.000	32.00
ATOM	530	OD1	ASP	A	86	57.283	5.983	23.028	1.000	31.29
ATOM	531	OD2	ASP	A	86	57.330	6.991	21.070	1.000	32.88
ATOM	532	C	ASP	A	86	61.287	8.298	22.434	1.000	27.98
ATOM	533	O	ASP	A	86	61.426	9.448	22.029	1.000	23.19
ATOM	534	N	VAL	A	87	62.044	7.759	23.386	1.000	21.53
ATOM	535	CA	VAL	A	87	63.071	8.542	24.056	1.000	20.22
ATOM	536	CB	VAL	A	87	62.603	8.986	25.458	1.000	26.46
ATOM	537	CG1	VAL	A	87	63.720	9.700	26.207	1.000	24.62
ATOM	538	CG2	VAL	A	87	61.388	9.895	25.352	1.000	25.17
ATOM	539	C	VAL	A	87	64.351	7.740	24.198	1.000	23.75
ATOM	540	O	VAL	A	87	64.311	6.537	24.472	1.000	26.72
ATOM	541	N	ALA	A	88	65.488	8.400	24.013	1.000	22.89
ATOM	542	CA	ALA	A	88	66.760	7.766	24.350	1.000	21.75
ATOM	543	CB	ALA	A	88	67.562	7.361	23.128	1.000	20.27
ATOM	544	C	ALA	A	88	67.554	8.732	25.234	1.000	24.86

ATOM	545	O	ALA	A	88	67.614	9.931	24.941	1.000	25.52
ATOM	546	N	VAL	A	89	68.133	8.190	26.290	1.000	22.71
ATOM	547	CA	VAL	A	89	68.941	8.943	27.242	1.000	21.03
ATOM	548	CB	VAL	A	89	68.273	9.059	28.619	1.000	26.69
ATOM	549	CG1	VAL	A	89	69.077	9.959	29.552	1.000	22.65
ATOM	550	CG2	VAL	A	89	66.854	9.602	28.502	1.000	19.47
ATOM	551	C	VAL	A	89	70.291	8.249	27.383	1.000	20.81
ATOM	552	O	VAL	A	89	70.347	7.096	27.818	1.000	22.03
ATOM	553	N	ASN	A	90	71.367	8.939	27.005	1.000	19.58
ATOM	554	CA	ASN	A	90	72.695	8.336	27.105	1.000	21.95
ATOM	555	CB	ASN	A	90	73.590	8.778	25.940	1.000	20.86
ATOM	556	CG	ASN	A	90	73.116	8.208	24.611	1.000	24.64
ATOM	557	OD1	ASN	A	90	72.514	8.903	23.785	1.000	25.87
ATOM	558	ND2	ASN	A	90	73.396	6.930	24.405	1.000	19.47
ATOM	559	C	ASN	A	90	73.346	8.680	28.440	1.000	25.33
ATOM	560	O	ASN	A	90	73.842	9.790	28.609	1.000	24.77
ATOM	561	N	CYS	A	91	73.353	7.734	29.377	1.000	22.76
ATOM	562	CA	CYS	A	91	74.035	7.962	30.646	1.000	24.30
ATOM	563	CB	CYS	A	91	73.078	7.785	31.830	1.000	21.56
ATOM	564	SG	CYS	A	91	71.780	9.046	31.900	1.000	26.30
ATOM	565	C	CYS	A	91	75.244	7.045	30.818	1.000	26.70
ATOM	566	O	CYS	A	91	76.075	7.325	31.693	1.000	23.50
ATOM	567	N	ALA	A	92	75.370	5.987	30.014	1.000	24.53
ATOM	568	CA	ALA	A	92	76.584	5.164	30.095	1.000	25.46
ATOM	569	CB	ALA	A	92	76.617	4.053	29.056	1.000	17.19
ATOM	570	C	ALA	A	92	77.828	6.029	29.938	1.000	29.08
ATOM	571	O	ALA	A	92	77.960	6.832	29.012	1.000	21.74
ATOM	572	N	GLY	A	93	78.761	5.870	30.874	1.000	26.43
ATOM	573	CA	GLY	A	93	79.968	6.688	30.863	1.000	21.76
ATOM	574	C	GLY	A	93	80.973	6.213	31.898	1.000	26.37
ATOM	575	O	GLY	A	93	80.618	5.566	32.884	1.000	21.56
ATOM	576	N	ILE	A	94	82.241	6.549	31.675	1.000	22.95
ATOM	577	CA	ILE	A	94	83.284	6.187	32.626	1.000	23.39
ATOM	578	CB	ILE	A	94	84.202	5.061	32.107	1.000	23.77
ATOM	579	CG2	ILE	A	94	83.443	3.739	32.043	1.000	23.99
ATOM	580	CG1	ILE	A	94	84.872	5.403	30.774	1.000	26.25
ATOM	581	CD1	ILE	A	94	85.890	4.373	30.312	1.000	27.52
ATOM	582	C	ILE	A	94	84.136	7.411	32.952	1.000	25.18
ATOM	583	O	ILE	A	94	84.147	8.392	32.212	1.000	20.18
ATOM	584	N	ALA	A	95	84.841	7.327	34.071	1.000	30.99
ATOM	585	CA	ALA	A	95	85.701	8.409	34.529	1.000	31.12
ATOM	586	CB	ALA	A	95	85.203	8.956	35.861	1.000	25.55
ATOM	587	C	ALA	A	95	87.133	7.924	34.689	1.000	30.69
ATOM	588	O	ALA	A	95	87.340	6.756	35.011	1.000	26.55
ATOM	589	N	VAL	A	96	88.101	8.803	34.473	1.000	26.73
ATOM	590	CA	VAL	A	96	89.465	8.504	34.874	1.000	25.75
ATOM	591	CB	VAL	A	96	90.383	7.900	33.795	1.000	35.08
ATOM	592	CG1	VAL	A	96	89.750	6.702	33.103	1.000	52.12
ATOM	593	CG2	VAL	A	96	90.760	8.960	32.768	1.000	41.24
ATOM	594	C	VAL	A	96	90.096	9.811	35.353	1.000	24.96
ATOM	595	O	VAL	A	96	89.705	10.888	34.903	1.000	24.58
ATOM	596	N	ALA	A	97	91.063	9.688	36.254	1.000	22.38
ATOM	597	CA	ALA	A	97	91.802	10.883	36.648	1.000	21.56
ATOM	598	CB	ALA	A	97	91.603	11.239	38.105	1.000	29.25
ATOM	599	C	ALA	A	97	93.265	10.618	36.313	1.000	25.19
ATOM	600	O	ALA	A	97	93.879	9.717	36.875	1.000	28.39
ATOM	601	N	SER	A	98	93.804	11.403	35.382	1.000	21.29
ATOM	602	CA	SER	A	98	95.185	11.135	34.972	1.000	25.00
ATOM	603	CB	SER	A	98	95.202	9.932	34.031	1.000	24.99
ATOM	604	OG	SER	A	98	96.526	9.479	33.788	1.000	24.22
ATOM	605	C	SER	A	98	95.751	12.391	34.346	1.000	26.54

ATOM	606	O	SER	A	98	95.142	12.938	33.427	1.000	22.14
ATOM	607	N	LYS	A	99	96.886	12.866	34.841	1.000	20.88
ATOM	608	CA	LYS	A	99	97.482	14.073	34.285	1.000	25.15
ATOM	609	CB	LYS	A	99	98.556	14.615	35.230	1.000	24.83
ATOM	610	CG	LYS	A	99	97.977	15.198	36.515	1.000	25.85
ATOM	611	CD	LYS	A	99	99.074	15.324	37.563	1.000	31.66
ATOM	612	CE	LYS	A	99	98.556	15.983	38.833	1.000	36.77
ATOM	613	NZ	LYS	A	99	99.590	16.860	39.449	1.000	50.56
ATOM	614	C	LYS	A	99	98.080	13.823	32.905	1.000	26.15
ATOM	615	O	LYS	A	99	98.577	12.729	32.630	1.000	22.84
ATOM	616	N	THR	A	100	98.038	14.837	32.044	1.000	20.67
ATOM	617	CA	THR	A	100	98.657	14.728	30.723	1.000	18.37
ATOM	618	CB	THR	A	100	98.611	16.080	29.989	1.000	22.10
ATOM	619	OG1	THR	A	100	97.253	16.349	29.621	1.000	23.52
ATOM	620	CG2	THR	A	100	99.413	16.049	28.694	1.000	21.67
ATOM	621	C	THR	A	100	100.108	14.269	30.845	1.000	22.79
ATOM	622	O	THR	A	100	100.536	13.330	30.171	1.000	21.78
ATOM	623	N	TYR	A	101	100.821	14.958	31.731	1.000	22.60
ATOM	624	CA	TYR	A	101	102.201	14.670	32.073	1.000	24.11
ATOM	625	CB	TYR	A	101	103.177	15.281	31.065	1.000	21.94
ATOM	626	CG	TYR	A	101	104.619	14.943	31.362	1.000	26.06
ATOM	627	CD1	TYR	A	101	105.517	15.952	31.675	1.000	27.69
ATOM	628	CE1	TYR	A	101	106.835	15.651	31.950	1.000	30.87
ATOM	629	CD2	TYR	A	101	105.074	13.633	31.332	1.000	28.68
ATOM	630	CE2	TYR	A	101	106.393	13.319	31.602	1.000	29.73
ATOM	631	CZ	TYR	A	101	107.265	14.338	31.912	1.000	33.41
ATOM	632	OH	TYR	A	101	108.590	14.059	32.183	1.000	32.89
ATOM	633	C	TYR	A	101	102.517	15.222	33.462	1.000	29.23
ATOM	634	O	TYR	A	101	102.057	16.312	33.799	1.000	25.97
ATOM	635	N	ASN	A	102	103.280	14.468	34.240	1.000	30.11
ATOM	636	CA	ASN	A	102	103.722	14.888	35.565	1.000	27.66
ATOM	637	CB	ASN	A	102	103.050	14.019	36.632	1.000	31.17
ATOM	638	CG	ASN	A	102	103.342	14.473	38.047	1.000	34.75
ATOM	639	OD1	ASN	A	102	104.386	15.056	38.326	1.000	35.20
ATOM	640	ND2	ASN	A	102	102.405	14.196	38.944	1.000	24.47
ATOM	641	C	ASN	A	102	105.239	14.800	35.674	1.000	24.25
ATOM	642	O	ASN	A	102	105.793	13.706	35.784	1.000	27.18
ATOM	643	N	LEU	A	103	105.917	15.938	35.639	1.000	27.28
ATOM	644	CA	LEU	A	103	107.377	15.978	35.641	1.000	30.32
ATOM	645	CB	LEU	A	103	107.862	17.419	35.527	1.000	29.30
ATOM	646	CG	LEU	A	103	109.359	17.699	35.508	1.000	31.61
ATOM	647	CD1	LEU	A	103	110.065	16.887	34.426	1.000	34.65
ATOM	648	CD2	LEU	A	103	109.639	19.177	35.284	1.000	27.87
ATOM	649	C	LEU	A	103	107.952	15.312	36.888	1.000	36.01
ATOM	650	O	LEU	A	103	108.817	14.448	36.800	1.000	38.35
ATOM	651	N	LYS	A	104	107.451	15.715	38.052	1.000	40.99
ATOM	652	CA	LYS	A	104	107.983	15.240	39.324	1.000	42.00
ATOM	653	CB	LYS	A	104	107.336	15.999	40.472	1.000	49.59
ATOM	654	C	LYS	A	104	107.803	13.738	39.480	1.000	38.56
ATOM	655	O	LYS	A	104	108.705	13.052	39.970	1.000	44.22
ATOM	656	N	LYS	A	105	106.657	13.212	39.067	1.000	33.35
ATOM	657	CA	LYS	A	105	106.386	11.785	39.147	1.000	33.59
ATOM	658	CB	LYS	A	105	104.884	11.507	39.226	1.000	42.15
ATOM	659	CG	LYS	A	105	104.271	11.477	40.612	1.000	51.74
ATOM	660	CD	LYS	A	105	103.136	10.461	40.692	1.000	61.56
ATOM	661	CE	LYS	A	105	103.327	9.347	39.675	1.000	67.86
ATOM	662	NZ	LYS	A	105	103.163	7.990	40.272	1.000	70.57
ATOM	663	C	LYS	A	105	106.933	11.030	37.938	1.000	31.13
ATOM	664	O	LYS	A	105	106.964	9.801	37.943	1.000	31.14
ATOM	665	N	GLY	A	106	107.340	11.761	36.902	1.000	26.45
ATOM	666	CA	GLY	A	106	107.796	11.094	35.685	1.000	24.64

ATOM	667	C	GLY	A	106	106.701	10.239	35.083	1.000	27.43
ATOM	668	O	GLY	A	106	106.886	9.081	34.715	1.000	32.86
ATOM	669	N	GLN	A	107	105.502	10.813	34.985	1.000	31.11
ATOM	670	CA	GLN	A	107	104.374	10.038	34.477	1.000	31.27
ATOM	671	CB	GLN	A	107	103.362	9.742	35.574	1.000	28.80
ATOM	672	C	GLN	A	107	103.696	10.751	33.303	1.000	28.71
ATOM	673	O	GLN	A	107	103.435	11.948	33.346	1.000	24.27
ATOM	674	N	THR	A	108	103.430	9.961	32.274	1.000	27.64
ATOM	675	CA	THR	A	108	102.755	10.383	31.062	1.000	28.26
ATOM	676	CB	THR	A	108	103.610	10.129	29.808	1.000	27.09
ATOM	677	OG1	THR	A	108	104.883	10.783	29.912	1.000	25.29
ATOM	678	CG2	THR	A	108	102.922	10.733	28.587	1.000	25.91
ATOM	679	C	THR	A	108	101.428	9.637	30.923	1.000	24.77
ATOM	680	O	THR	A	108	101.378	8.417	31.067	1.000	23.98
ATOM	681	N	HIS	A	109	100.355	10.364	30.653	1.000	24.32
ATOM	682	CA	HIS	A	109	99.051	9.760	30.368	1.000	22.88
ATOM	683	CB	HIS	A	109	98.089	10.835	29.870	1.000	23.80
ATOM	684	CG	HIS	A	109	96.630	10.563	29.980	1.000	21.82
ATOM	685	CD2	HIS	A	109	95.644	11.296	30.566	1.000	22.92
ATOM	686	ND1	HIS	A	109	96.003	9.467	29.439	1.000	21.44
ATOM	687	CE1	HIS	A	109	94.699	9.521	29.691	1.000	21.06
ATOM	688	NE2	HIS	A	109	94.463	10.622	30.380	1.000	21.74
ATOM	689	C	HIS	A	109	99.205	8.654	29.341	1.000	21.10
ATOM	690	O	HIS	A	109	99.885	8.840	28.325	1.000	25.00
ATOM	691	N	THR	A	110	98.632	7.478	29.588	1.000	20.94
ATOM	692	CA	THR	A	110	98.750	6.454	28.546	1.000	21.31
ATOM	693	CB	THR	A	110	98.515	5.040	29.088	1.000	24.24
ATOM	694	OG1	THR	A	110	97.114	4.885	29.372	1.000	24.99
ATOM	695	CG2	THR	A	110	99.305	4.818	30.376	1.000	20.99
ATOM	696	C	THR	A	110	97.739	6.708	27.427	1.000	24.56
ATOM	697	O	THR	A	110	96.693	7.326	27.615	1.000	27.87
ATOM	698	N	LEU	A	111	98.072	6.217	26.237	1.000	26.90
ATOM	699	CA	LEU	A	111	97.172	6.378	25.099	1.000	23.81
ATOM	700	CB	LEU	A	111	97.883	5.931	23.820	1.000	24.39
ATOM	701	CG	LEU	A	111	97.223	6.387	22.516	1.000	26.14
ATOM	702	CD1	LEU	A	111	97.221	7.908	22.457	1.000	23.83
ATOM	703	CD2	LEU	A	111	97.923	5.788	21.308	1.000	26.57
ATOM	704	C	LEU	A	111	95.900	5.582	25.310	1.000	25.30
ATOM	705	O	LEU	A	111	94.786	5.995	24.987	1.000	26.74
ATOM	706	N	GLU	A	112	96.019	4.371	25.856	1.000	25.49
ATOM	707	CA	GLU	A	112	94.818	3.548	25.972	1.000	31.39
ATOM	708	CB	GLU	A	112	95.191	2.092	26.246	1.000	42.44
ATOM	709	CG	GLU	A	112	95.339	1.235	25.003	1.000	59.05
ATOM	710	CD	GLU	A	112	94.763	1.797	23.722	1.000	63.34
ATOM	711	OE1	GLU	A	112	93.684	1.315	23.296	1.000	56.32
ATOM	712	OE2	GLU	A	112	95.377	2.706	23.110	1.000	40.30
ATOM	713	C	GLU	A	112	93.874	4.076	27.044	1.000	29.79
ATOM	714	O	GLU	A	112	92.670	3.798	26.999	1.000	25.74
ATOM	715	N	ASP	A	113	94.368	4.833	28.020	1.000	27.16
ATOM	716	CA	ASP	A	113	93.433	5.446	28.969	1.000	24.71
ATOM	717	CB	ASP	A	113	94.133	6.035	30.187	1.000	26.03
ATOM	718	CG	ASP	A	113	94.281	5.075	31.345	1.000	29.48
ATOM	719	OD1	ASP	A	113	93.602	4.030	31.393	1.000	29.16
ATOM	720	OD2	ASP	A	113	95.103	5.363	32.235	1.000	28.92
ATOM	721	C	ASP	A	113	92.648	6.540	28.253	1.000	23.27
ATOM	722	O	ASP	A	113	91.454	6.730	28.487	1.000	26.21
ATOM	723	N	PHE	A	114	93.313	7.279	27.365	1.000	21.26
ATOM	724	CA	PHE	A	114	92.614	8.328	26.610	1.000	21.70
ATOM	725	CB	PHE	A	114	93.609	9.168	25.808	1.000	21.14
ATOM	726	CG	PHE	A	114	93.010	10.429	25.212	1.000	22.14
ATOM	727	CD1	PHE	A	114	92.544	10.432	23.907	1.000	23.21

ATOM	728	CD2	PHE	A	114	92.918	11.590	25.965	1.000	19.80
ATOM	729	CE1	PHE	A	114	91.993	11.579	23.354	1.000	21.77
ATOM	730	CE2	PHE	A	114	92.375	12.736	25.417	1.000	22.25
ATOM	731	CZ	PHE	A	114	91.910	12.732	24.117	1.000	18.82
ATOM	732	C	PHE	A	114	91.582	7.719	25.669	1.000	21.96
ATOM	733	O	PHE	A	114	90.462	8.204	25.526	1.000	23.38
ATOM	734	N	GLN	A	115	91.989	6.632	25.021	1.000	23.07
ATOM	735	CA	GLN	A	115	91.174	5.965	24.017	1.000	25.81
ATOM	736	CB	GLN	A	115	92.006	4.911	23.278	1.000	26.74
ATOM	737	CG	GLN	A	115	91.332	4.324	22.045	1.000	30.43
ATOM	738	CD	GLN	A	115	91.298	5.316	20.896	1.000	32.36
ATOM	739	OE1	GLN	A	115	92.328	5.858	20.509	1.000	34.25
ATOM	740	NE2	GLN	A	115	90.114	5.565	20.352	1.000	30.37
ATOM	741	C	GLN	A	115	89.948	5.307	24.629	1.000	24.71
ATOM	742	O	GLN	A	115	88.834	5.443	24.119	1.000	27.44
ATOM	743	N	ARG	A	116	90.149	4.577	25.726	1.000	20.08
ATOM	744	CA	ARG	A	116	89.030	3.888	26.368	1.000	23.81
ATOM	745	CB	ARG	A	116	89.519	3.077	27.562	1.000	25.84
ATOM	746	C	ARG	A	116	87.944	4.868	26.808	1.000	21.73
ATOM	747	O	ARG	A	116	86.752	4.589	26.705	1.000	22.10
ATOM	748	N	VAL	A	117	88.376	6.027	27.297	1.000	22.33
ATOM	749	CA	VAL	A	117	87.449	7.054	27.770	1.000	21.83
ATOM	750	CB	VAL	A	117	88.220	8.132	28.550	1.000	21.56
ATOM	751	CG1	VAL	A	117	87.409	9.401	28.744	1.000	19.07
ATOM	752	CG2	VAL	A	117	88.648	7.572	29.907	1.000	26.74
ATOM	753	C	VAL	A	117	86.673	7.663	26.612	1.000	22.89
ATOM	754	O	VAL	A	117	85.461	7.877	26.721	1.000	25.91
ATOM	755	N	LEU	A	118	87.377	7.927	25.516	1.000	19.69
ATOM	756	CA	LEU	A	118	86.764	8.413	24.290	1.000	22.74
ATOM	757	CB	LEU	A	118	87.803	8.612	23.187	1.000	24.33
ATOM	758	CG	LEU	A	118	88.570	9.921	23.065	1.000	36.03
ATOM	759	CD1	LEU	A	118	89.032	10.111	21.622	1.000	33.40
ATOM	760	CD2	LEU	A	118	87.757	11.119	23.527	1.000	37.38
ATOM	761	C	LEU	A	118	85.746	7.406	23.760	1.000	22.78
ATOM	762	O	LEU	A	118	84.604	7.710	23.436	1.000	24.98
ATOM	763	N	ASP	A	119	86.218	6.164	23.658	1.000	22.45
ATOM	764	CA	ASP	A	119	85.406	5.118	23.056	1.000	22.07
ATOM	765	CB	ASP	A	119	86.197	3.806	23.000	1.000	22.13
ATOM	766	CG	ASP	A	119	87.190	3.829	21.848	1.000	25.42
ATOM	767	OD1	ASP	A	119	87.869	2.807	21.639	1.000	36.77
ATOM	768	OD2	ASP	A	119	87.287	4.870	21.172	1.000	26.49
ATOM	769	C	ASP	A	119	84.094	4.920	23.796	1.000	27.63
ATOM	770	O	ASP	A	119	83.030	4.908	23.177	1.000	24.16
ATOM	771	N	VAL	A	120	84.143	4.769	25.119	1.000	24.76
ATOM	772	CA	VAL	A	120	82.887	4.553	25.842	1.000	22.84
ATOM	773	CB	VAL	A	120	83.139	4.070	27.282	1.000	22.77
ATOM	774	CG1	VAL	A	120	81.837	3.978	28.060	1.000	21.91
ATOM	775	CG2	VAL	A	120	83.836	2.719	27.288	1.000	25.70
ATOM	776	C	VAL	A	120	82.027	5.809	25.873	1.000	18.91
ATOM	777	O	VAL	A	120	80.851	5.772	25.508	1.000	24.20
ATOM	778	N	ASN	A	121	82.591	6.926	26.299	1.000	16.61
ATOM	779	CA	ASN	A	121	81.831	8.133	26.575	1.000	18.33
ATOM	780	CB	ASN	A	121	82.687	9.131	27.370	1.000	21.37
ATOM	781	CG	ASN	A	121	82.845	8.766	28.830	1.000	25.63
ATOM	782	OD1	ASN	A	121	82.362	7.733	29.286	1.000	24.93
ATOM	783	ND2	ASN	A	121	83.530	9.649	29.554	1.000	20.70
ATOM	784	C	ASN	A	121	81.327	8.853	25.325	1.000	19.73
ATOM	785	O	ASN	A	121	80.194	9.344	25.345	1.000	20.54
ATOM	786	N	LEU	A	122	82.173	8.935	24.309	1.000	21.10
ATOM	787	CA	LEU	A	122	81.869	9.718	23.115	1.000	18.45
ATOM	788	CB	LEU	A	122	83.085	10.545	22.703	1.000	19.01

ATOM	789	CG	LEU	A	122	82.961	11.441	21.473	1.000	21.55
ATOM	790	CD1	LEU	A	122	81.614	12.151	21.431	1.000	19.41
ATOM	791	CD2	LEU	A	122	84.086	12.461	21.448	1.000	15.87
ATOM	792	C	LEU	A	122	81.422	8.826	21.968	1.000	22.39
ATOM	793	O	LEU	A	122	80.294	8.948	21.478	1.000	26.80
ATOM	794	N	MET	A	123	82.287	7.917	21.519	1.000	20.44
ATOM	795	CA	MET	A	123	81.888	7.004	20.445	1.000	21.80
ATOM	796	CB	MET	A	123	83.060	6.098	20.072	1.000	24.27
ATOM	797	CG	MET	A	123	82.766	5.105	18.953	1.000	25.44
ATOM	798	SD	MET	A	123	82.185	3.504	19.564	1.000	31.17
ATOM	799	CE	MET	A	123	83.722	2.836	20.210	1.000	23.57
ATOM	800	C	MET	A	123	80.668	6.186	20.853	1.000	26.48
ATOM	801	O	MET	A	123	79.736	5.992	20.064	1.000	25.13
ATOM	802	N	GLY	A	124	80.656	5.705	22.094	1.000	22.35
ATOM	803	CA	GLY	A	124	79.550	4.901	22.591	1.000	23.21
ATOM	804	C	GLY	A	124	78.229	5.642	22.491	1.000	27.27
ATOM	805	O	GLY	A	124	77.207	5.078	22.095	1.000	23.57
ATOM	806	N	THR	A	125	78.256	6.925	22.860	1.000	22.28
ATOM	807	CA	THR	A	125	77.045	7.739	22.795	1.000	19.72
ATOM	808	CB	THR	A	125	77.255	9.070	23.532	1.000	19.88
ATOM	809	OG1	THR	A	125	77.070	8.852	24.945	1.000	22.47
ATOM	810	CG2	THR	A	125	76.220	10.106	23.132	1.000	18.39
ATOM	811	C	THR	A	125	76.625	7.967	21.343	1.000	22.09
ATOM	812	O	THR	A	125	75.439	7.912	21.004	1.000	22.22
ATOM	813	N	PHE	A	126	77.573	8.233	20.443	1.000	21.93
ATOM	814	CA	PHE	A	126	77.185	8.425	19.041	1.000	23.53
ATOM	815	CB	PHE	A	126	78.343	8.986	18.210	1.000	18.23
ATOM	816	CG	PHE	A	126	77.956	9.204	16.748	1.000	26.47
ATOM	817	CD1	PHE	A	126	77.173	10.285	16.374	1.000	23.71
ATOM	818	CD2	PHE	A	126	78.369	8.314	15.770	1.000	28.65
ATOM	819	CE1	PHE	A	126	76.824	10.480	15.052	1.000	20.77
ATOM	820	CE2	PHE	A	126	78.048	8.518	14.439	1.000	25.27
ATOM	821	CZ	PHE	A	126	77.273	9.604	14.078	1.000	21.02
ATOM	822	C	PHE	A	126	76.694	7.114	18.432	1.000	21.88
ATOM	823	O	PHE	A	126	75.783	7.138	17.606	1.000	21.58
ATOM	824	N	ASN	A	127	77.261	5.979	18.820	1.000	18.70
ATOM	825	CA	ASN	A	127	76.759	4.686	18.354	1.000	24.14
ATOM	826	CB	ASN	A	127	77.568	3.521	18.926	1.000	22.79
ATOM	827	CG	ASN	A	127	77.317	2.205	18.218	1.000	28.53
ATOM	828	OD1	ASN	A	127	77.052	2.133	17.017	1.000	29.14
ATOM	829	ND2	ASN	A	127	77.406	1.109	18.966	1.000	23.91
ATOM	830	C	ASN	A	127	75.295	4.488	18.729	1.000	25.90
ATOM	831	O	ASN	A	127	74.490	4.051	17.904	1.000	28.86
ATOM	832	N	VAL	A	128	74.942	4.799	19.979	1.000	24.12
ATOM	833	CA	VAL	A	128	73.540	4.664	20.384	1.000	23.40
ATOM	834	CB	VAL	A	128	73.350	4.890	21.893	1.000	24.92
ATOM	835	CG1	VAL	A	128	71.874	4.993	22.246	1.000	20.34
ATOM	836	CG2	VAL	A	128	74.007	3.759	22.670	1.000	22.63
ATOM	837	C	VAL	A	128	72.672	5.641	19.595	1.000	25.23
ATOM	838	O	VAL	A	128	71.566	5.294	19.159	1.000	26.49
ATOM	839	N	ILE	A	129	73.189	6.861	19.429	1.000	20.97
ATOM	840	CA	ILE	A	129	72.408	7.892	18.747	1.000	21.24
ATOM	841	CB	ILE	A	129	73.136	9.249	18.751	1.000	20.96
ATOM	842	CG2	ILE	A	129	72.554	10.167	17.682	1.000	17.73
ATOM	843	CG1	ILE	A	129	73.138	9.927	20.124	1.000	19.83
ATOM	844	CD1	ILE	A	129	73.850	11.258	20.195	1.000	18.61
ATOM	845	C	ILE	A	129	72.092	7.495	17.314	1.000	23.42
ATOM	846	O	ILE	A	129	70.950	7.589	16.864	1.000	24.98
ATOM	847	N	ARG	A	130	73.100	7.041	16.577	1.000	22.21
ATOM	848	CA	ARG	A	130	72.896	6.800	15.146	1.000	23.59
ATOM	849	CB	ARG	A	130	74.246	6.567	14.467	1.000	21.91

ATOM	850	CG	ARG	A	130	74.743	5.138	14.544	1.000	20.59
ATOM	851	CD	ARG	A	130	76.260	5.024	14.349	1.000	20.58
ATOM	852	NE	ARG	A	130	76.675	3.671	14.727	1.000	25.06
ATOM	853	CZ	ARG	A	130	76.637	2.621	13.913	1.000	26.85
ATOM	854	NH1	ARG	A	130	77.028	1.433	14.360	1.000	23.90
ATOM	855	NH2	ARG	A	130	76.220	2.741	12.659	1.000	20.62
ATOM	856	C	ARG	A	130	71.944	5.632	14.904	1.000	28.92
ATOM	857	O	ARG	A	130	71.179	5.628	13.932	1.000	23.14
ATOM	858	N	LEU	A	131	71.989	4.638	15.783	1.000	25.17
ATOM	859	CA	LEU	A	131	71.155	3.452	15.636	1.000	26.41
ATOM	860	CB	LEU	A	131	71.766	2.270	16.394	1.000	25.84
ATOM	861	CG	LEU	A	131	73.124	1.753	15.921	1.000	28.03
ATOM	862	CD1	LEU	A	131	73.678	0.706	16.878	1.000	21.36
ATOM	863	CD2	LEU	A	131	73.010	1.186	14.512	1.000	32.31
ATOM	864	C	LEU	A	131	69.730	3.723	16.110	1.000	28.46
ATOM	865	O	LEU	A	131	68.749	3.359	15.463	1.000	24.94
ATOM	866	N	VAL	A	132	69.582	4.386	17.257	1.000	22.13
ATOM	867	CA	VAL	A	132	68.250	4.675	17.773	1.000	18.99
ATOM	868	CB	VAL	A	132	68.258	5.172	19.228	1.000	22.45
ATOM	869	CG1	VAL	A	132	68.598	6.653	19.308	1.000	22.79
ATOM	870	CG2	VAL	A	132	66.902	4.903	19.873	1.000	23.15
ATOM	871	C	VAL	A	132	67.548	5.705	16.896	1.000	23.29
ATOM	872	O	VAL	A	132	66.314	5.691	16.833	1.000	28.24
ATOM	873	N	ALA	A	133	68.292	6.586	16.229	1.000	20.41
ATOM	874	CA	ALA	A	133	67.650	7.522	15.304	1.000	23.10
ATOM	875	CB	ALA	A	133	68.671	8.475	14.697	1.000	21.23
ATOM	876	C	ALA	A	133	66.891	6.777	14.209	1.000	24.68
ATOM	877	O	ALA	A	133	65.772	7.133	13.844	1.000	23.73
ATOM	878	N	GLY	A	134	67.494	5.719	13.666	1.000	27.05
ATOM	879	CA	GLY	A	134	66.830	4.933	12.634	1.000	31.03
ATOM	880	C	GLY	A	134	65.602	4.225	13.168	1.000	34.82
ATOM	881	O	GLY	A	134	64.647	3.969	12.436	1.000	33.45
ATOM	882	N	GLU	A	135	65.593	3.877	14.455	1.000	32.85
ATOM	883	CA	GLU	A	135	64.406	3.276	15.056	1.000	28.48
ATOM	884	CB	GLU	A	135	64.737	2.662	16.414	1.000	27.36
ATOM	885	CG	GLU	A	135	65.749	1.534	16.374	1.000	30.53
ATOM	886	CD	GLU	A	135	65.173	0.289	15.721	1.000	35.24
ATOM	887	OE1	GLU	A	135	65.894	-0.377	14.955	1.000	46.65
ATOM	888	OE2	GLU	A	135	63.990	-0.011	15.987	1.000	45.16
ATOM	889	C	GLU	A	135	63.300	4.312	15.218	1.000	28.72
ATOM	890	O	GLU	A	135	62.128	4.062	14.943	1.000	30.55
ATOM	891	N	MET	A	136	63.662	5.510	15.681	1.000	22.47
ATOM	892	CA	MET	A	136	62.637	6.534	15.868	1.000	22.92
ATOM	893	CB	MET	A	136	63.185	7.726	16.656	1.000	25.85
ATOM	894	CG	MET	A	136	63.669	7.411	18.066	1.000	28.30
ATOM	895	SD	MET	A	136	64.718	8.715	18.754	1.000	25.89
ATOM	896	CE	MET	A	136	64.988	8.067	20.408	1.000	23.78
ATOM	897	C	MET	A	136	62.095	6.992	14.519	1.000	21.98
ATOM	898	O	MET	A	136	60.937	7.374	14.392	1.000	28.43
ATOM	899	N	GLY	A	137	62.925	6.971	13.477	1.000	24.89
ATOM	900	CA	GLY	A	137	62.492	7.463	12.174	1.000	28.70
ATOM	901	C	GLY	A	137	61.344	6.642	11.616	1.000	33.98
ATOM	902	O	GLY	A	137	60.627	7.094	10.717	1.000	35.20
ATOM	903	N	GLN	A	138	61.158	5.439	12.134	1.000	28.41
ATOM	904	CA	GLN	A	138	60.034	4.585	11.795	1.000	29.57
ATOM	905	CB	GLN	A	138	60.413	3.124	12.014	1.000	33.29
ATOM	906	C	GLN	A	138	58.798	4.942	12.606	1.000	33.23
ATOM	907	O	GLN	A	138	57.700	4.431	12.349	1.000	36.19
ATOM	908	N	ASN	A	139	58.901	5.817	13.613	1.000	30.84
ATOM	909	CA	ASN	A	139	57.673	6.225	14.290	1.000	29.71
ATOM	910	CB	ASN	A	139	57.951	6.918	15.616	1.000	30.72

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ATOM    911  CG  ASN A 139      58.539   6.044  16.695 1.000 34.82
ATOM    912  OD1 ASN A 139      58.309   4.840  16.748 1.000 33.24
ATOM    913  ND2 ASN A 139      59.316   6.643  17.599 1.000 27.65
ATOM    914  C   ASN A 139      56.873   7.178  13.405 1.000 32.55
ATOM    915  O   ASN A 139      57.442   7.999  12.686 1.000 31.43
ATOM    916  N   GLU A 140      55.545   7.095  13.455 1.000 32.34
ATOM    917  CA  GLU A 140      54.765   8.130  12.765 1.000 33.47
ATOM    918  CB  GLU A 140      53.338   7.698  12.521 1.000 37.78
ATOM    919  C   GLU A 140      54.829   9.390  13.622 1.000 33.02
ATOM    920  O   GLU A 140      54.685   9.297  14.848 1.000 31.57
ATOM    921  N   PRO A 141      55.053  10.552  13.029 1.000 31.82
ATOM    922  CD  PRO A 141      55.197  10.833  11.595 1.000 30.12
ATOM    923  CA  PRO A 141      55.180  11.763  13.850 1.000 30.60
ATOM    924  CB  PRO A 141      55.411  12.868  12.821 1.000 32.30
ATOM    925  CG  PRO A 141      55.887  12.174  11.595 1.000 31.21
ATOM    926  C   PRO A 141      53.892  12.026  14.618 1.000 37.04
ATOM    927  O   PRO A 141      52.792  11.743  14.141 1.000 38.85
ATOM    928  N   ASP A 142      54.021  12.576  15.821 1.000 32.62
ATOM    929  CA  ASP A 142      52.834  13.005  16.551 1.000 30.09
ATOM    930  CB  ASP A 142      53.157  13.277  18.011 1.000 33.63
ATOM    931  CG  ASP A 142      54.244  14.306  18.230 1.000 34.93
ATOM    932  OD1 ASP A 142      54.390  15.234  17.410 1.000 25.78
ATOM    933  OD2 ASP A 142      54.970  14.201  19.245 1.000 35.97
ATOM    934  C   ASP A 142      52.264  14.255  15.881 1.000 35.02
ATOM    935  O   ASP A 142      52.772  14.699  14.848 1.000 29.85
ATOM    936  N   GLN A 143      51.224  14.806  16.494 1.000 33.99
ATOM    937  CA  GLN A 143      50.579  16.007  15.990 1.000 38.09
ATOM    938  CB  GLN A 143      49.401  16.380  16.884 1.000 38.12
ATOM    939  C   GLN A 143      51.547  17.178  15.890 1.000 40.07
ATOM    940  O   GLN A 143      51.283  18.129  15.148 1.000 37.88
ATOM    941  N   GLY A 144      52.656  17.131  16.625 1.000 34.69
ATOM    942  CA  GLY A 144      53.618  18.218  16.584 1.000 30.50
ATOM    943  C   GLY A 144      54.788  17.941  15.657 1.000 30.57
ATOM    944  O   GLY A 144      55.778  18.668  15.666 1.000 30.79
ATOM    945  N   GLY A 145      54.672  16.890  14.857 1.000 28.63
ATOM    946  CA  GLY A 145      55.684  16.503  13.902 1.000 26.20
ATOM    947  C   GLY A 145      56.793  15.676  14.508 1.000 26.99
ATOM    948  O   GLY A 145      57.758  15.304  13.841 1.000 25.11
ATOM    949  N   GLN A 146      56.698  15.370  15.797 1.000 26.86
ATOM    950  CA  GLN A 146      57.832  14.756  16.482 1.000 26.54
ATOM    951  CB  GLN A 146      57.877  15.283  17.926 1.000 26.88
ATOM    952  CG  GLN A 146      59.203  14.976  18.615 1.000 31.74
ATOM    953  CD  GLN A 146      59.200  15.449  20.057 1.000 29.31
ATOM    954  OE1 GLN A 146      59.518  16.613  20.289 1.000 27.82
ATOM    955  NE2 GLN A 146      58.846  14.565  20.986 1.000 26.30
ATOM    956  C   GLN A 146      57.794  13.239  16.479 1.000 27.53
ATOM    957  O   GLN A 146      56.743  12.629  16.690 1.000 29.32
ATOM    958  N   ARG A 147      58.957  12.634  16.243 1.000 22.43
ATOM    959  CA  ARG A 147      59.134  11.200  16.208 1.000 20.85
ATOM    960  CB  ARG A 147      59.862  10.761  14.937 1.000 22.13
ATOM    961  CG  ARG A 147      59.043  10.766  13.663 1.000 23.35
ATOM    962  CD  ARG A 147      59.897  10.222  12.520 1.000 26.83
ATOM    963  NE  ARG A 147      59.101  10.004  11.309 1.000 28.18
ATOM    964  CZ  ARG A 147      59.049  10.883  10.313 1.000 32.45
ATOM    965  NH1 ARG A 147      58.306  10.621   9.246 1.000 37.01
ATOM    966  NH2 ARG A 147      59.736  12.015  10.385 1.000 28.29
ATOM    967  C   ARG A 147      59.968  10.684  17.380 1.000 27.24
ATOM    968  O   ARG A 147      59.901   9.498  17.710 1.000 25.10
ATOM    969  N   GLY A 148      60.776  11.548  17.994 1.000 25.61
ATOM    970  CA  GLY A 148      61.684  11.059  19.019 1.000 24.15
ATOM    971  C   GLY A 148      62.366  12.198  19.761 1.000 25.59
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ATOM	972	O	GLY	A	148	62.382	13.322	19.276	1.000	22.65
ATOM	973	N	VAL	A	149	62.915	11.884	20.929	1.000	23.40
ATOM	974	CA	VAL	A	149	63.767	12.768	21.704	1.000	22.36
ATOM	975	CB	VAL	A	149	63.054	13.362	22.930	1.000	22.74
ATOM	976	CG1	VAL	A	149	63.922	14.438	23.584	1.000	25.25
ATOM	977	CG2	VAL	A	149	61.703	13.937	22.539	1.000	29.65
ATOM	978	C	VAL	A	149	65.016	12.010	22.150	1.000	22.55
ATOM	979	O	VAL	A	149	64.954	10.907	22.666	1.000	20.35
ATOM	980	N	ILE	A	150	66.183	12.602	21.951	1.000	24.00
ATOM	981	CA	ILE	A	150	67.442	12.020	22.398	1.000	22.32
ATOM	982	CB	ILE	A	150	68.377	11.695	21.220	1.000	24.31
ATOM	983	CG2	ILE	A	150	69.729	11.203	21.721	1.000	22.61
ATOM	984	CG1	ILE	A	150	67.770	10.709	20.223	1.000	21.68
ATOM	985	CD1	ILE	A	150	68.649	10.447	19.019	1.000	23.99
ATOM	986	C	ILE	A	150	68.127	12.991	23.356	1.000	23.92
ATOM	987	O	ILE	A	150	68.257	14.172	23.041	1.000	23.96
ATOM	988	N	ILE	A	151	68.538	12.488	24.512	1.000	20.89
ATOM	989	CA	ILE	A	151	69.131	13.304	25.564	1.000	18.19
ATOM	990	CB	ILE	A	151	68.203	13.414	26.786	1.000	19.91
ATOM	991	CG2	ILE	A	151	68.801	14.266	27.888	1.000	15.01
ATOM	992	CG1	ILE	A	151	66.808	13.944	26.428	1.000	23.45
ATOM	993	CD1	ILE	A	151	65.805	13.843	27.556	1.000	24.66
ATOM	994	C	ILE	A	151	70.462	12.689	25.972	1.000	21.60
ATOM	995	O	ILE	A	151	70.484	11.519	26.366	1.000	22.74
ATOM	996	N	ASN	A	152	71.524	13.476	25.847	1.000	20.63
ATOM	997	CA	ASN	A	152	72.867	12.980	26.113	1.000	18.99
ATOM	998	CB	ASN	A	152	73.836	13.384	24.992	1.000	19.22
ATOM	999	CG	ASN	A	152	73.211	13.074	23.637	1.000	20.09
ATOM	1000	OD1	ASN	A	152	72.912	13.977	22.856	1.000	33.18
ATOM	1001	ND2	ASN	A	152	73.017	11.795	23.386	1.000	15.75
ATOM	1002	C	ASN	A	152	73.395	13.517	27.437	1.000	22.55
ATOM	1003	O	ASN	A	152	72.860	14.512	27.943	1.000	21.43
ATOM	1004	N	THR	A	153	74.438	12.854	27.944	1.000	21.33
ATOM	1005	CA	THR	A	153	75.076	13.367	29.150	1.000	19.67
ATOM	1006	CB	THR	A	153	75.042	12.363	30.311	1.000	20.60
ATOM	1007	OG1	THR	A	153	73.730	11.801	30.437	1.000	20.29
ATOM	1008	CG2	THR	A	153	75.315	13.093	31.620	1.000	20.24
ATOM	1009	C	THR	A	153	76.520	13.771	28.857	1.000	20.09
ATOM	1010	O	THR	A	153	77.336	12.925	28.497	1.000	20.49
ATOM	1011	N	ALA	A	154	76.797	15.058	29.012	1.000	17.99
ATOM	1012	CA	ALA	A	154	78.157	15.580	28.941	1.000	21.71
ATOM	1013	CB	ALA	A	154	78.230	16.898	28.183	1.000	15.72
ATOM	1014	C	ALA	A	154	78.678	15.745	30.366	1.000	18.97
ATOM	1015	O	ALA	A	154	78.650	14.795	31.141	1.000	21.19
ATOM	1016	N	SER	A	155	79.124	16.935	30.721	1.000	22.57
ATOM	1017	CA	SER	A	155	79.663	17.252	32.041	1.000	19.46
ATOM	1018	CB	SER	A	155	80.837	16.336	32.389	1.000	20.68
ATOM	1019	OG	SER	A	155	81.569	16.832	33.512	1.000	19.92
ATOM	1020	C	SER	A	155	80.132	18.696	32.066	1.000	19.44
ATOM	1021	O	SER	A	155	80.451	19.246	31.008	1.000	18.95
ATOM	1022	N	VAL	A	156	80.226	19.329	33.240	1.000	17.21
ATOM	1023	CA	VAL	A	156	80.827	20.659	33.282	1.000	16.12
ATOM	1024	CB	VAL	A	156	80.606	21.359	34.638	1.000	22.05
ATOM	1025	CG1	VAL	A	156	79.111	21.526	34.908	1.000	23.71
ATOM	1026	CG2	VAL	A	156	81.286	20.596	35.758	1.000	23.52
ATOM	1027	C	VAL	A	156	82.320	20.593	32.977	1.000	15.83
ATOM	1028	O	VAL	A	156	82.948	21.638	32.780	1.000	18.99
ATOM	1029	N	ALA	A	157	82.900	19.397	32.941	1.000	17.17
ATOM	1030	CA	ALA	A	157	84.294	19.227	32.522	1.000	17.12
ATOM	1031	CB	ALA	A	157	84.783	17.824	32.831	1.000	14.53
ATOM	1032	C	ALA	A	157	84.460	19.540	31.038	1.000	21.86

ATOM	1033	O	ALA	A	157	85.573	19.705	30.542	1.000	22.45
ATOM	1034	N	ALA	A	158	83.369	19.638	30.292	1.000	21.67
ATOM	1035	CA	ALA	A	158	83.424	20.098	28.902	1.000	21.61
ATOM	1036	CB	ALA	A	158	82.081	19.902	28.225	1.000	18.71
ATOM	1037	C	ALA	A	158	83.835	21.561	28.856	1.000	21.63
ATOM	1038	O	ALA	A	158	84.331	22.076	27.858	1.000	21.79
ATOM	1039	N	PHE	A	159	83.621	22.268	29.969	1.000	18.53
ATOM	1040	CA	PHE	A	159	83.861	23.702	30.013	1.000	21.39
ATOM	1041	CB	PHE	A	159	82.558	24.436	30.386	1.000	22.21
ATOM	1042	CG	PHE	A	159	81.370	24.032	29.536	1.000	23.73
ATOM	1043	CD1	PHE	A	159	80.333	23.289	30.067	1.000	23.69
ATOM	1044	CD2	PHE	A	159	81.317	24.402	28.204	1.000	24.10
ATOM	1045	CE1	PHE	A	159	79.251	22.908	29.283	1.000	23.62
ATOM	1046	CE2	PHE	A	159	80.237	24.032	27.419	1.000	26.19
ATOM	1047	CZ	PHE	A	159	79.204	23.293	27.960	1.000	22.24
ATOM	1048	C	PHE	A	159	84.949	24.110	30.997	1.000	24.75
ATOM	1049	O	PHE	A	159	85.636	25.110	30.780	1.000	22.24
ATOM	1050	N	GLU	A	160	85.118	23.385	32.097	1.000	22.83
ATOM	1051	CA	GLU	A	160	86.123	23.705	33.102	1.000	24.53
ATOM	1052	CB	GLU	A	160	85.536	24.348	34.355	1.000	26.40
ATOM	1053	CG	GLU	A	160	84.785	25.647	34.193	1.000	31.12
ATOM	1054	CD	GLU	A	160	83.296	25.519	34.442	1.000	34.00
ATOM	1055	OE1	GLU	A	160	82.527	26.110	33.652	1.000	30.58
ATOM	1056	OE2	GLU	A	160	82.858	24.845	35.397	1.000	25.33
ATOM	1057	C	GLU	A	160	86.865	22.434	33.526	1.000	22.82
ATOM	1058	O	GLU	A	160	86.876	22.118	34.722	1.000	22.77
ATOM	1059	N	GLY	A	161	87.450	21.730	32.560	1.000	17.77
ATOM	1060	CA	GLY	A	161	88.190	20.511	32.884	1.000	20.11
ATOM	1061	C	GLY	A	161	89.207	20.771	33.988	1.000	22.40
ATOM	1062	O	GLY	A	161	89.925	21.771	33.954	1.000	19.29
ATOM	1063	N	GLN	A	162	89.250	19.898	34.986	1.000	21.52
ATOM	1064	CA	GLN	A	162	90.173	20.050	36.106	1.000	24.64
ATOM	1065	CB	GLN	A	162	89.554	19.454	37.375	1.000	21.82
ATOM	1066	CG	GLN	A	162	88.342	20.197	37.909	1.000	23.34
ATOM	1067	CD	GLN	A	162	88.026	19.778	39.341	1.000	25.33
ATOM	1068	OE1	GLN	A	162	87.431	18.723	39.550	1.000	25.69
ATOM	1069	NE2	GLN	A	162	88.428	20.600	40.306	1.000	21.01
ATOM	1070	C	GLN	A	162	91.495	19.343	35.833	1.000	24.73
ATOM	1071	O	GLN	A	162	91.586	18.564	34.881	1.000	21.61
ATOM	1072	N	VAL	A	163	92.483	19.598	36.690	1.000	22.60
ATOM	1073	CA	VAL	A	163	93.739	18.841	36.572	1.000	22.73
ATOM	1074	CB	VAL	A	163	94.752	19.204	37.667	1.000	20.09
ATOM	1075	CG1	VAL	A	163	95.932	18.237	37.643	1.000	22.25
ATOM	1076	CG2	VAL	A	163	95.233	20.641	37.504	1.000	14.78
ATOM	1077	C	VAL	A	163	93.436	17.350	36.637	1.000	23.33
ATOM	1078	O	VAL	A	163	92.734	16.916	37.552	1.000	26.46
ATOM	1079	N	GLY	A	164	93.925	16.560	35.692	1.000	20.35
ATOM	1080	CA	GLY	A	164	93.645	15.138	35.650	1.000	19.48
ATOM	1081	C	GLY	A	164	92.459	14.754	34.783	1.000	23.54
ATOM	1082	O	GLY	A	164	92.222	13.560	34.572	1.000	22.45
ATOM	1083	N	GLN	A	165	91.689	15.709	34.263	1.000	21.33
ATOM	1084	CA	GLN	A	165	90.485	15.381	33.506	1.000	22.94
ATOM	1085	CB	GLN	A	165	89.313	16.245	33.986	1.000	22.47
ATOM	1086	CG	GLN	A	165	88.735	15.870	35.337	1.000	26.75
ATOM	1087	CD	GLN	A	165	87.425	16.603	35.591	1.000	28.68
ATOM	1088	OE1	GLN	A	165	87.305	17.805	35.337	1.000	24.50
ATOM	1089	NE2	GLN	A	165	86.442	15.866	36.091	1.000	28.31
ATOM	1090	C	GLN	A	165	90.598	15.595	32.002	1.000	25.31
ATOM	1091	O	GLN	A	165	89.564	15.728	31.325	1.000	24.16
ATOM	1092	N	ALA	A	166	91.795	15.645	31.432	1.000	20.17
ATOM	1093	CA	ALA	A	166	91.934	15.880	29.992	1.000	19.87

ATOM	1094	CB	ALA	A	166	93.411	15.881	29.620	1.000	21.17
ATOM	1095	C	ALA	A	166	91.166	14.870	29.156	1.000	22.80
ATOM	1096	O	ALA	A	166	90.404	15.240	28.254	1.000	23.88
ATOM	1097	N	ALA	A	167	91.325	13.572	29.410	1.000	20.76
ATOM	1098	CA	ALA	A	167	90.598	12.576	28.619	1.000	18.57
ATOM	1099	CB	ALA	A	167	91.081	11.188	28.998	1.000	20.24
ATOM	1100	C	ALA	A	167	89.093	12.682	28.810	1.000	22.84
ATOM	1101	O	ALA	A	167	88.305	12.642	27.866	1.000	21.97
ATOM	1102	N	TYR	A	168	88.644	12.808	30.059	1.000	19.71
ATOM	1103	CA	TYR	A	168	87.224	12.964	30.346	1.000	18.72
ATOM	1104	CB	TYR	A	168	86.990	13.100	31.854	1.000	19.50
ATOM	1105	CG	TYR	A	168	85.552	12.961	32.315	1.000	17.69
ATOM	1106	CD1	TYR	A	168	84.865	11.762	32.189	1.000	19.32
ATOM	1107	CE1	TYR	A	168	83.554	11.634	32.611	1.000	19.30
ATOM	1108	CD2	TYR	A	168	84.887	14.038	32.890	1.000	16.32
ATOM	1109	CE2	TYR	A	168	83.574	13.929	33.324	1.000	18.41
ATOM	1110	CZ	TYR	A	168	82.919	12.724	33.181	1.000	22.12
ATOM	1111	OH	TYR	A	168	81.616	12.584	33.603	1.000	21.21
ATOM	1112	C	TYR	A	168	86.651	14.186	29.630	1.000	21.33
ATOM	1113	O	TYR	A	168	85.593	14.116	29.009	1.000	21.12
ATOM	1114	N	SER	A	169	87.367	15.294	29.741	1.000	18.05
ATOM	1115	CA	SER	A	169	86.938	16.572	29.194	1.000	17.88
ATOM	1116	CB	SER	A	169	87.876	17.706	29.606	1.000	19.40
ATOM	1117	OG	SER	A	169	87.889	17.932	31.008	1.000	20.81
ATOM	1118	C	SER	A	169	86.848	16.499	27.667	1.000	22.37
ATOM	1119	O	SER	A	169	85.950	17.101	27.079	1.000	22.30
ATOM	1120	N	ALA	A	170	87.787	15.770	27.080	1.000	21.43
ATOM	1121	CA	ALA	A	170	87.820	15.524	25.643	1.000	20.27
ATOM	1122	CB	ALA	A	170	89.051	14.700	25.279	1.000	17.19
ATOM	1123	C	ALA	A	170	86.552	14.801	25.203	1.000	23.52
ATOM	1124	O	ALA	A	170	85.894	15.162	24.229	1.000	21.45
ATOM	1125	N	SER	A	171	86.204	13.754	25.947	1.000	18.86
ATOM	1126	CA	SER	A	171	85.032	12.950	25.622	1.000	17.10
ATOM	1127	CB	SER	A	171	85.051	11.681	26.473	1.000	18.30
ATOM	1128	OG	SER	A	171	84.557	11.914	27.786	1.000	22.04
ATOM	1129	C	SER	A	171	83.740	13.735	25.811	1.000	22.12
ATOM	1130	O	SER	A	171	82.803	13.603	25.015	1.000	23.65
ATOM	1131	N	LYS	A	172	83.668	14.564	26.858	1.000	17.81
ATOM	1132	CA	LYS	A	172	82.442	15.323	27.110	1.000	20.04
ATOM	1133	CB	LYS	A	172	82.330	15.703	28.592	1.000	18.29
ATOM	1134	CG	LYS	A	172	82.267	14.485	29.505	1.000	17.34
ATOM	1135	CD	LYS	A	172	81.143	13.533	29.128	1.000	21.47
ATOM	1136	CE	LYS	A	172	80.971	12.469	30.211	1.000	19.97
ATOM	1137	NZ	LYS	A	172	79.740	11.651	30.012	1.000	16.10
ATOM	1138	C	LYS	A	172	82.365	16.563	26.232	1.000	21.83
ATOM	1139	O	LYS	A	172	81.282	16.962	25.804	1.000	20.78
ATOM	1140	N	GLY	A	173	83.501	17.189	25.934	1.000	20.14
ATOM	1141	CA	GLY	A	173	83.504	18.311	25.002	1.000	19.14
ATOM	1142	C	GLY	A	173	83.042	17.843	23.623	1.000	22.28
ATOM	1143	O	GLY	A	173	82.382	18.601	22.905	1.000	20.41
ATOM	1144	N	GLY	A	174	83.399	16.599	23.295	1.000	18.15
ATOM	1145	CA	GLY	A	174	82.918	15.952	22.083	1.000	19.24
ATOM	1146	C	GLY	A	174	81.397	15.897	22.049	1.000	23.10
ATOM	1147	O	GLY	A	174	80.746	16.228	21.053	1.000	18.74
ATOM	1148	N	ILE	A	175	80.801	15.470	23.165	1.000	23.71
ATOM	1149	CA	ILE	A	175	79.344	15.374	23.240	1.000	18.13
ATOM	1150	CB	ILE	A	175	78.859	14.808	24.585	1.000	22.59
ATOM	1151	CG2	ILE	A	175	77.333	14.772	24.601	1.000	19.28
ATOM	1152	CG1	ILE	A	175	79.439	13.444	24.954	1.000	21.35
ATOM	1153	CD1	ILE	A	175	78.870	12.312	24.142	1.000	29.59
ATOM	1154	C	ILE	A	175	78.710	16.741	23.050	1.000	20.98

ATOM	1155	O	ILE	A	175	77.720	16.959	22.343	1.000	22.66
ATOM	1156	N	VAL	A	176	79.321	17.723	23.727	1.000	14.93
ATOM	1157	CA	VAL	A	176	78.799	19.079	23.568	1.000	13.95
ATOM	1158	CB	VAL	A	176	79.535	20.078	24.467	1.000	20.03
ATOM	1159	CG1	VAL	A	176	79.154	21.504	24.109	1.000	18.47
ATOM	1160	CG2	VAL	A	176	79.229	19.794	25.936	1.000	18.79
ATOM	1161	C	VAL	A	176	78.897	19.488	22.105	1.000	19.79
ATOM	1162	O	VAL	A	176	77.916	19.919	21.505	1.000	20.43
ATOM	1163	N	GLY	A	177	80.074	19.348	21.490	1.000	20.46
ATOM	1164	CA	GLY	A	177	80.236	19.823	20.125	1.000	20.42
ATOM	1165	C	GLY	A	177	79.334	19.148	19.115	1.000	23.30
ATOM	1166	O	GLY	A	177	78.913	19.781	18.138	1.000	22.67
ATOM	1167	N	MET	A	178	78.997	17.869	19.277	1.000	19.64
ATOM	1168	CA	MET	A	178	78.174	17.239	18.244	1.000	18.59
ATOM	1169	CB	MET	A	178	78.527	15.754	18.109	1.000	18.46
ATOM	1170	CG	MET	A	178	78.124	14.883	19.283	1.000	21.01
ATOM	1171	SD	MET	A	178	78.675	13.176	19.081	1.000	24.29
ATOM	1172	CE	MET	A	178	77.901	12.383	20.486	1.000	18.63
ATOM	1173	C	MET	A	178	76.677	17.381	18.498	1.000	21.98
ATOM	1174	O	MET	A	178	75.854	16.917	17.703	1.000	22.55
ATOM	1175	N	THR	A	179	76.303	18.020	19.601	1.000	18.53
ATOM	1176	CA	THR	A	179	74.882	18.192	19.915	1.000	18.51
ATOM	1177	CB	THR	A	179	74.719	18.925	21.266	1.000	19.84
ATOM	1178	OG1	THR	A	179	75.155	18.062	22.331	1.000	18.46
ATOM	1179	CG2	THR	A	179	73.261	19.271	21.537	1.000	15.79
ATOM	1180	C	THR	A	179	74.148	18.940	18.813	1.000	23.20
ATOM	1181	O	THR	A	179	73.114	18.480	18.315	1.000	21.33
ATOM	1182	N	LEU	A	180	74.649	20.099	18.396	1.000	21.40
ATOM	1183	CA	LEU	A	180	73.940	20.900	17.400	1.000	20.22
ATOM	1184	CB	LEU	A	180	74.563	22.297	17.303	1.000	17.06
ATOM	1185	CG	LEU	A	180	73.884	23.245	16.308	1.000	23.58
ATOM	1186	CD1	LEU	A	180	72.454	23.531	16.740	1.000	24.53
ATOM	1187	CD2	LEU	A	180	74.683	24.531	16.158	1.000	21.92
ATOM	1188	C	LEU	A	180	73.906	20.253	16.020	1.000	18.83
ATOM	1189	O	LEU	A	180	72.827	20.176	15.421	1.000	22.66
ATOM	1190	N	PRO	A	181	75.022	19.807	15.460	1.000	20.32
ATOM	1191	CD	PRO	A	181	76.403	19.915	15.952	1.000	19.33
ATOM	1192	CA	PRO	A	181	74.976	19.137	14.148	1.000	20.68
ATOM	1193	CB	PRO	A	181	76.411	18.645	13.926	1.000	22.44
ATOM	1194	CG	PRO	A	181	77.074	18.748	15.264	1.000	20.59
ATOM	1195	C	PRO	A	181	74.034	17.943	14.120	1.000	27.41
ATOM	1196	O	PRO	A	181	73.304	17.744	13.139	1.000	22.18
ATOM	1197	N	ILE	A	182	74.023	17.111	15.168	1.000	20.68
ATOM	1198	CA	ILE	A	182	73.095	15.976	15.144	1.000	18.87
ATOM	1199	CB	ILE	A	182	73.354	14.981	16.283	1.000	18.97
ATOM	1200	CG2	ILE	A	182	72.317	13.868	16.266	1.000	19.51
ATOM	1201	CG1	ILE	A	182	74.760	14.380	16.254	1.000	19.27
ATOM	1202	CD1	ILE	A	182	75.128	13.520	17.437	1.000	20.55
ATOM	1203	C	ILE	A	182	71.660	16.499	15.170	1.000	23.55
ATOM	1204	O	ILE	A	182	70.825	16.022	14.398	1.000	23.85
ATOM	1205	N	ALA	A	183	71.390	17.490	16.026	1.000	19.15
ATOM	1206	CA	ALA	A	183	70.071	18.126	16.012	1.000	20.67
ATOM	1207	CB	ALA	A	183	70.005	19.247	17.039	1.000	20.13
ATOM	1208	C	ALA	A	183	69.758	18.656	14.611	1.000	25.01
ATOM	1209	O	ALA	A	183	68.653	18.519	14.087	1.000	21.56
ATOM	1210	N	ARG	A	184	70.739	19.287	13.962	1.000	21.73
ATOM	1211	CA	ARG	A	184	70.485	19.799	12.610	1.000	21.73
ATOM	1212	CB	ARG	A	184	71.642	20.679	12.134	1.000	17.36
ATOM	1213	CG	ARG	A	184	71.779	21.973	12.907	1.000	16.93
ATOM	1214	CD	ARG	A	184	73.039	22.748	12.567	1.000	17.35
ATOM	1215	NE	ARG	A	184	72.915	24.175	12.842	1.000	21.03

ATOM	1216	CZ	ARG	A	184	73.838	25.093	12.581	1.000	20.96
ATOM	1217	NH1	ARG	A	184	73.645	26.374	12.864	1.000	18.08
ATOM	1218	NH2	ARG	A	184	75.000	24.762	12.025	1.000	20.87
ATOM	1219	C	ARG	A	184	70.238	18.626	11.667	1.000	21.16
ATOM	1220	O	ARG	A	184	69.317	18.667	10.841	1.000	21.06
ATOM	1221	N	ASP	A	185	71.030	17.564	11.799	1.000	16.34
ATOM	1222	CA	ASP	A	185	70.844	16.368	10.987	1.000	19.85
ATOM	1223	CB	ASP	A	185	71.782	15.251	11.432	1.000	21.41
ATOM	1224	CG	ASP	A	185	73.175	15.269	10.850	1.000	24.87
ATOM	1225	OD1	ASP	A	185	73.959	14.367	11.247	1.000	21.48
ATOM	1226	OD2	ASP	A	185	73.527	16.130	10.020	1.000	18.18
ATOM	1227	C	ASP	A	185	69.419	15.818	11.060	1.000	26.43
ATOM	1228	O	ASP	A	185	68.808	15.496	10.036	1.000	20.25
ATOM	1229	N	LEU	A	186	68.893	15.689	12.282	1.000	20.78
ATOM	1230	CA	LEU	A	186	67.630	14.992	12.483	1.000	20.72
ATOM	1231	CB	LEU	A	186	67.689	14.210	13.806	1.000	20.73
ATOM	1232	CG	LEU	A	186	68.918	13.319	13.997	1.000	22.47
ATOM	1233	CD1	LEU	A	186	68.781	12.514	15.282	1.000	20.41
ATOM	1234	CD2	LEU	A	186	69.120	12.401	12.799	1.000	19.86
ATOM	1235	C	LEU	A	186	66.411	15.900	12.496	1.000	22.45
ATOM	1236	O	LEU	A	186	65.263	15.440	12.554	1.000	24.25
ATOM	1237	N	ALA	A	187	66.624	17.210	12.453	1.000	15.94
ATOM	1238	CA	ALA	A	187	65.484	18.127	12.463	1.000	18.11
ATOM	1239	CB	ALA	A	187	65.992	19.563	12.429	1.000	15.41
ATOM	1240	C	ALA	A	187	64.490	17.852	11.344	1.000	24.07
ATOM	1241	O	ALA	A	187	63.275	17.911	11.601	1.000	24.26
ATOM	1242	N	PRO	A	188	64.865	17.560	10.109	1.000	27.53
ATOM	1243	CD	PRO	A	188	66.210	17.517	9.510	1.000	30.77
ATOM	1244	CA	PRO	A	188	63.843	17.246	9.097	1.000	28.68
ATOM	1245	CB	PRO	A	188	64.660	16.872	7.848	1.000	28.47
ATOM	1246	CG	PRO	A	188	65.927	17.649	8.036	1.000	32.25
ATOM	1247	C	PRO	A	188	62.971	16.066	9.471	1.000	32.36
ATOM	1248	O	PRO	A	188	61.897	15.882	8.886	1.000	30.80
ATOM	1249	N	ILE	A	189	63.381	15.222	10.423	1.000	27.68
ATOM	1250	CA	ILE	A	189	62.466	14.100	10.677	1.000	27.31
ATOM	1251	CB	ILE	A	189	63.133	12.746	10.415	1.000	31.22
ATOM	1252	CG2	ILE	A	189	63.458	12.582	8.932	1.000	36.22
ATOM	1253	CG1	ILE	A	189	64.389	12.443	11.227	1.000	27.19
ATOM	1254	CD1	ILE	A	189	64.855	11.011	11.005	1.000	28.72
ATOM	1255	C	ILE	A	189	61.890	14.171	12.088	1.000	23.39
ATOM	1256	O	ILE	A	189	61.367	13.198	12.633	1.000	25.26
ATOM	1257	N	GLY	A	190	61.973	15.350	12.696	1.000	18.90
ATOM	1258	CA	GLY	A	190	61.345	15.608	13.970	1.000	20.72
ATOM	1259	C	GLY	A	190	61.925	14.880	15.159	1.000	23.61
ATOM	1260	O	GLY	A	190	61.202	14.431	16.052	1.000	25.17
ATOM	1261	N	ILE	A	191	63.248	14.742	15.202	1.000	20.22
ATOM	1262	CA	ILE	A	191	63.887	14.146	16.375	1.000	20.80
ATOM	1263	CB	ILE	A	191	64.762	12.938	16.021	1.000	20.20
ATOM	1264	CG2	ILE	A	191	65.535	12.457	17.243	1.000	23.67
ATOM	1265	CG1	ILE	A	191	63.978	11.784	15.393	1.000	21.41
ATOM	1266	CD1	ILE	A	191	64.857	10.645	14.911	1.000	20.93
ATOM	1267	C	ILE	A	191	64.730	15.216	17.070	1.000	23.22
ATOM	1268	O	ILE	A	191	65.691	15.702	16.474	1.000	23.95
ATOM	1269	N	ARG	A	192	64.342	15.563	18.298	1.000	20.33
ATOM	1270	CA	ARG	A	192	65.063	16.567	19.069	1.000	19.85
ATOM	1271	CB	ARG	A	192	64.185	17.172	20.169	1.000	20.25
ATOM	1272	CG	ARG	A	192	63.053	18.031	19.641	1.000	21.19
ATOM	1273	CD	ARG	A	192	62.285	18.757	20.720	1.000	20.91
ATOM	1274	NE	ARG	A	192	61.452	17.886	21.554	1.000	21.19
ATOM	1275	CZ	ARG	A	192	61.635	17.793	22.871	1.000	23.70
ATOM	1276	NH1	ARG	A	192	62.597	18.494	23.462	1.000	20.82

ATOM	1277	NH2	ARG	A	192	60.869	17.000	23.606	1.000	22.23
ATOM	1278	C	ARG	A	192	66.308	15.944	19.699	1.000	19.83
ATOM	1279	O	ARG	A	192	66.281	14.761	20.052	1.000	21.50
ATOM	1280	N	VAL	A	193	67.352	16.752	19.827	1.000	20.77
ATOM	1281	CA	VAL	A	193	68.585	16.282	20.464	1.000	21.10
ATOM	1282	CB	VAL	A	193	69.706	16.014	19.449	1.000	21.95
ATOM	1283	CG1	VAL	A	193	70.938	15.439	20.132	1.000	21.45
ATOM	1284	CG2	VAL	A	193	69.225	15.065	18.356	1.000	18.93
ATOM	1285	C	VAL	A	193	69.024	17.321	21.493	1.000	21.27
ATOM	1286	O	VAL	A	193	69.264	18.476	21.157	1.000	18.26
ATOM	1287	N	MET	A	194	69.099	16.893	22.746	1.000	20.77
ATOM	1288	CA	MET	A	194	69.458	17.762	23.856	1.000	20.59
ATOM	1289	CB	MET	A	194	68.226	18.038	24.719	1.000	21.73
ATOM	1290	CG	MET	A	194	67.235	19.025	24.121	1.000	20.14
ATOM	1291	SD	MET	A	194	67.834	20.721	24.138	1.000	21.56
ATOM	1292	CE	MET	A	194	68.099	20.980	25.905	1.000	16.72
ATOM	1293	C	MET	A	194	70.561	17.137	24.706	1.000	24.88
ATOM	1294	O	MET	A	194	70.762	15.918	24.723	1.000	20.06
ATOM	1295	N	THR	A	195	71.293	17.991	25.431	1.000	23.18
ATOM	1296	CA	THR	A	195	72.360	17.453	26.281	1.000	21.06
ATOM	1297	CB	THR	A	195	73.726	17.690	25.615	1.000	20.20
ATOM	1298	OG1	THR	A	195	73.807	16.866	24.440	1.000	20.09
ATOM	1299	CG2	THR	A	195	74.865	17.267	26.529	1.000	20.65
ATOM	1300	C	THR	A	195	72.320	18.078	27.668	1.000	19.09
ATOM	1301	O	THR	A	195	72.095	19.281	27.817	1.000	22.56
ATOM	1302	N	ILE	A	196	72.531	17.260	28.695	1.000	21.42
ATOM	1303	CA	ILE	A	196	72.642	17.775	30.054	1.000	21.21
ATOM	1304	CB	ILE	A	196	71.775	16.991	31.058	1.000	22.86
ATOM	1305	CG2	ILE	A	196	72.088	17.388	32.496	1.000	13.56
ATOM	1306	CG1	ILE	A	196	70.270	17.101	30.786	1.000	18.56
ATOM	1307	CD1	ILE	A	196	69.434	15.969	31.334	1.000	21.74
ATOM	1308	C	ILE	A	196	74.109	17.727	30.487	1.000	19.78
ATOM	1309	O	ILE	A	196	74.770	16.720	30.243	1.000	20.85
ATOM	1310	N	ALA	A	197	74.586	18.798	31.107	1.000	17.33
ATOM	1311	CA	ALA	A	197	75.910	18.819	31.706	1.000	20.74
ATOM	1312	CB	ALA	A	197	76.703	20.032	31.236	1.000	15.79
ATOM	1313	C	ALA	A	197	75.807	18.823	33.232	1.000	17.73
ATOM	1314	O	ALA	A	197	75.684	19.885	33.844	1.000	20.44
ATOM	1315	N	PRO	A	198	75.851	17.663	33.859	1.000	15.54
ATOM	1316	CD	PRO	A	198	75.908	16.311	33.281	1.000	14.44
ATOM	1317	CA	PRO	A	198	75.815	17.630	35.325	1.000	18.78
ATOM	1318	CB	PRO	A	198	75.661	16.145	35.650	1.000	18.65
ATOM	1319	CG	PRO	A	198	75.273	15.478	34.368	1.000	16.32
ATOM	1320	C	PRO	A	198	77.101	18.178	35.939	1.000	21.23
ATOM	1321	O	PRO	A	198	78.200	18.050	35.387	1.000	21.65
ATOM	1322	N	GLY	A	199	76.973	18.801	37.111	1.000	16.71
ATOM	1323	CA	GLY	A	199	78.144	19.282	37.831	1.000	20.34
ATOM	1324	C	GLY	A	199	78.720	18.158	38.681	1.000	25.67
ATOM	1325	O	GLY	A	199	79.558	17.382	38.215	1.000	29.26
ATOM	1326	N	LEU	A	200	78.276	18.047	39.936	1.000	24.30
ATOM	1327	CA	LEU	A	200	78.728	16.935	40.779	1.000	24.04
ATOM	1328	CB	LEU	A	200	79.670	17.423	41.874	1.000	28.95
ATOM	1329	CG	LEU	A	200	80.780	18.398	41.494	1.000	27.68
ATOM	1330	CD1	LEU	A	200	81.456	18.959	42.741	1.000	23.71
ATOM	1331	CD2	LEU	A	200	81.833	17.748	40.608	1.000	26.72
ATOM	1332	C	LEU	A	200	77.516	16.224	41.373	1.000	21.56
ATOM	1333	O	LEU	A	200	76.691	16.873	42.026	1.000	24.91
ATOM	1334	N	PHE	A	201	77.391	14.922	41.160	1.000	18.56
ATOM	1335	CA	PHE	A	201	76.258	14.175	41.696	1.000	22.51
ATOM	1336	CB	PHE	A	201	75.324	13.676	40.585	1.000	18.39
ATOM	1337	CG	PHE	A	201	74.333	14.750	40.151	1.000	22.13

ATOM	1338	CD1	PHE	A	201	74.766	15.884	39.486	1.000	21.16
ATOM	1339	CD2	PHE	A	201	72.985	14.614	40.415	1.000	21.94
ATOM	1340	CE1	PHE	A	201	73.870	16.865	39.098	1.000	20.75
ATOM	1341	CE2	PHE	A	201	72.083	15.594	40.036	1.000	22.20
ATOM	1342	CZ	PHE	A	201	72.523	16.726	39.375	1.000	18.43
ATOM	1343	C	PHE	A	201	76.711	12.983	42.543	1.000	24.36
ATOM	1344	O	PHE	A	201	77.745	12.372	42.294	1.000	23.72
ATOM	1345	N	GLY	A	202	75.903	12.676	43.555	1.000	26.29
ATOM	1346	CA	GLY	A	202	76.191	11.573	44.455	1.000	27.80
ATOM	1347	C	GLY	A	202	75.787	10.233	43.872	1.000	26.77
ATOM	1348	O	GLY	A	202	74.706	9.721	44.164	1.000	32.55
ATOM	1349	N	THR	A	203	76.647	9.654	43.043	1.000	25.13
ATOM	1350	CA	THR	A	203	76.404	8.380	42.392	1.000	25.12
ATOM	1351	CB	THR	A	203	76.257	8.557	40.862	1.000	28.49
ATOM	1352	OG1	THR	A	203	77.560	8.874	40.347	1.000	23.32
ATOM	1353	CG2	THR	A	203	75.287	9.679	40.553	1.000	27.37
ATOM	1354	C	THR	A	203	77.565	7.429	42.650	1.000	27.93
ATOM	1355	O	THR	A	203	78.614	7.903	43.107	1.000	25.79
ATOM	1356	N	PRO	A	204	77.425	6.138	42.369	1.000	27.07
ATOM	1357	CD	PRO	A	204	76.190	5.445	41.943	1.000	29.16
ATOM	1358	CA	PRO	A	204	78.546	5.201	42.502	1.000	29.50
ATOM	1359	CB	PRO	A	204	77.974	3.880	41.969	1.000	27.25
ATOM	1360	CG	PRO	A	204	76.505	3.996	42.214	1.000	27.48
ATOM	1361	C	PRO	A	204	79.773	5.592	41.687	1.000	35.78
ATOM	1362	O	PRO	A	204	80.857	5.062	41.939	1.000	32.08
ATOM	1363	N	LEU	A	205	79.645	6.483	40.716	1.000	37.07
ATOM	1364	CA	LEU	A	205	80.788	6.983	39.963	1.000	31.42
ATOM	1365	CB	LEU	A	205	80.346	8.062	38.969	1.000	28.18
ATOM	1366	CG	LEU	A	205	81.354	8.485	37.900	1.000	35.16
ATOM	1367	CD1	LEU	A	205	81.596	7.353	36.911	1.000	31.93
ATOM	1368	CD2	LEU	A	205	80.884	9.746	37.187	1.000	31.91
ATOM	1369	C	LEU	A	205	81.856	7.554	40.889	1.000	27.98
ATOM	1370	O	LEU	A	205	83.042	7.313	40.676	1.000	34.06
ATOM	1371	N	LEU	A	206	81.465	8.320	41.904	1.000	21.36
ATOM	1372	CA	LEU	A	206	82.421	9.023	42.750	1.000	18.23
ATOM	1373	CB	LEU	A	206	81.777	10.282	43.351	1.000	19.00
ATOM	1374	CG	LEU	A	206	81.166	11.282	42.373	1.000	29.73
ATOM	1375	CD1	LEU	A	206	80.600	12.484	43.114	1.000	26.59
ATOM	1376	CD2	LEU	A	206	82.196	11.722	41.344	1.000	45.64
ATOM	1377	C	LEU	A	206	82.959	8.185	43.903	1.000	25.48
ATOM	1378	O	LEU	A	206	83.768	8.675	44.699	1.000	29.01
ATOM	1379	N	THR	A	207	82.518	6.943	44.017	1.000	27.24
ATOM	1380	CA	THR	A	207	82.834	6.112	45.176	1.000	24.16
ATOM	1381	CB	THR	A	207	82.002	4.814	45.180	1.000	31.81
ATOM	1382	OG1	THR	A	207	80.604	5.121	45.103	1.000	33.01
ATOM	1383	CG2	THR	A	207	82.189	4.062	46.492	1.000	39.64
ATOM	1384	C	THR	A	207	84.317	5.774	45.241	1.000	27.40
ATOM	1385	O	THR	A	207	84.893	5.719	46.330	1.000	34.76
ATOM	1386	N	SER	A	208	84.932	5.557	44.085	1.000	31.07
ATOM	1387	CA	SER	A	208	86.362	5.291	44.002	1.000	37.59
ATOM	1388	CB	SER	A	208	86.794	5.170	42.536	1.000	40.21
ATOM	1389	OG	SER	A	208	85.664	4.850	41.732	1.000	64.46
ATOM	1390	C	SER	A	208	87.164	6.379	44.711	1.000	39.66
ATOM	1391	O	SER	A	208	88.177	6.088	45.351	1.000	59.11
ATOM	1392	N	LEU	A	209	86.710	7.622	44.608	1.000	28.44
ATOM	1393	CA	LEU	A	209	87.362	8.752	45.254	1.000	35.84
ATOM	1394	CB	LEU	A	209	86.632	10.056	44.879	1.000	36.73
ATOM	1395	CG	LEU	A	209	86.694	10.394	43.380	1.000	35.96
ATOM	1396	CD1	LEU	A	209	85.999	11.711	43.072	1.000	20.66
ATOM	1397	CD2	LEU	A	209	88.146	10.411	42.921	1.000	33.37
ATOM	1398	C	LEU	A	209	87.414	8.605	46.770	1.000	34.49

ATOM	1399	O	LEU	A	209	86.475	8.101	47.383	1.000	32.58
ATOM	1400	N	PRO	A	210	88.512	9.043	47.374	1.000	29.27
ATOM	1401	CD	PRO	A	210	89.765	9.458	46.720	1.000	27.98
ATOM	1402	CA	PRO	A	210	88.602	9.147	48.831	1.000	29.98
ATOM	1403	CB	PRO	A	210	89.947	9.846	49.069	1.000	27.49
ATOM	1404	CG	PRO	A	210	90.746	9.460	47.866	1.000	25.08
ATOM	1405	C	PRO	A	210	87.479	10.015	49.389	1.000	31.11
ATOM	1406	O	PRO	A	210	87.131	11.047	48.810	1.000	31.99
ATOM	1407	N	GLU	A	211	86.929	9.576	50.514	1.000	27.60
ATOM	1408	CA	GLU	A	211	85.816	10.265	51.145	1.000	26.18
ATOM	1409	CB	GLU	A	211	85.562	9.614	52.509	1.000	40.32
ATOM	1410	CG	GLU	A	211	84.354	8.696	52.509	1.000	43.94
ATOM	1411	CD	GLU	A	211	84.054	8.131	53.884	1.000	42.42
ATOM	1412	OE1	GLU	A	211	83.181	8.700	54.573	1.000	30.45
ATOM	1413	OE2	GLU	A	211	84.705	7.119	54.222	1.000	31.95
ATOM	1414	C	GLU	A	211	86.092	11.748	51.308	1.000	24.00
ATOM	1415	O	GLU	A	211	85.265	12.615	51.031	1.000	24.47
ATOM	1416	N	LYS	A	212	87.308	12.033	51.770	1.000	22.33
ATOM	1417	CA	LYS	A	212	87.768	13.405	51.947	1.000	29.30
ATOM	1418	CB	LYS	A	212	89.228	13.403	52.387	1.000	40.01
ATOM	1419	C	LYS	A	212	87.595	14.237	50.680	1.000	23.78
ATOM	1420	O	LYS	A	212	87.161	15.389	50.730	1.000	24.76
ATOM	1421	N	VAL	A	213	87.925	13.677	49.521	1.000	24.58
ATOM	1422	CA	VAL	A	213	87.769	14.435	48.278	1.000	26.36
ATOM	1423	CB	VAL	A	213	88.451	13.686	47.120	1.000	35.53
ATOM	1424	CG1	VAL	A	213	88.325	14.449	45.808	1.000	27.07
ATOM	1425	CG2	VAL	A	213	89.916	13.443	47.469	1.000	38.54
ATOM	1426	C	VAL	A	213	86.297	14.679	47.965	1.000	24.27
ATOM	1427	O	VAL	A	213	85.865	15.790	47.657	1.000	23.99
ATOM	1428	N	ARG	A	214	85.503	13.619	48.050	1.000	23.64
ATOM	1429	CA	ARG	A	214	84.062	13.735	47.858	1.000	23.89
ATOM	1430	CB	ARG	A	214	83.387	12.395	48.152	1.000	28.02
ATOM	1431	CG	ARG	A	214	83.291	11.484	46.938	1.000	31.88
ATOM	1432	CD	ARG	A	214	83.728	10.064	47.279	1.000	35.66
ATOM	1433	NE	ARG	A	214	82.744	9.415	48.130	1.000	37.47
ATOM	1434	CZ	ARG	A	214	82.895	8.303	48.828	1.000	44.73
ATOM	1435	NH1	ARG	A	214	84.031	7.613	48.828	1.000	37.28
ATOM	1436	NH2	ARG	A	214	81.860	7.878	49.548	1.000	67.12
ATOM	1437	C	ARG	A	214	83.477	14.826	48.743	1.000	30.95
ATOM	1438	O	ARG	A	214	82.709	15.670	48.281	1.000	33.19
ATOM	1439	N	ASN	A	215	83.837	14.840	50.028	1.000	28.66
ATOM	1440	CA	ASN	A	215	83.308	15.887	50.902	1.000	27.53
ATOM	1441	CB	ASN	A	215	83.684	15.663	52.369	1.000	32.68
ATOM	1442	CG	ASN	A	215	83.258	14.304	52.883	1.000	31.08
ATOM	1443	OD1	ASN	A	215	82.446	13.619	52.262	1.000	37.63
ATOM	1444	ND2	ASN	A	215	83.810	13.898	54.017	1.000	43.42
ATOM	1445	C	ASN	A	215	83.810	17.258	50.469	1.000	18.44
ATOM	1446	O	ASN	A	215	83.057	18.231	50.485	1.000	30.03
ATOM	1447	N	PHE	A	216	85.081	17.340	50.084	1.000	22.51
ATOM	1448	CA	PHE	A	216	85.609	18.641	49.675	1.000	25.01
ATOM	1449	CB	PHE	A	216	87.113	18.554	49.401	1.000	26.17
ATOM	1450	CG	PHE	A	216	87.636	19.848	48.788	1.000	30.92
ATOM	1451	CD1	PHE	A	216	87.820	20.969	49.576	1.000	26.31
ATOM	1452	CD2	PHE	A	216	87.929	19.922	47.439	1.000	38.31
ATOM	1453	CE1	PHE	A	216	88.284	22.150	49.036	1.000	28.91
ATOM	1454	CE2	PHE	A	216	88.397	21.102	46.888	1.000	42.22
ATOM	1455	CZ	PHE	A	216	88.574	22.216	47.685	1.000	36.56
ATOM	1456	C	PHE	A	216	84.876	19.173	48.442	1.000	31.65
ATOM	1457	O	PHE	A	216	84.487	20.342	48.412	1.000	27.79
ATOM	1458	N	LEU	A	217	84.688	18.320	47.439	1.000	31.39
ATOM	1459	CA	LEU	A	217	83.933	18.685	46.238	1.000	32.23

ATOM	1460	CB	LEU	A	217	83.887	17.516	45.255	1.000	32.50
ATOM	1461	CG	LEU	A	217	85.207	16.990	44.682	1.000	29.24
ATOM	1462	CD1	LEU	A	217	84.970	15.797	43.765	1.000	17.82
ATOM	1463	CD2	LEU	A	217	85.962	18.082	43.942	1.000	29.21
ATOM	1464	C	LEU	A	217	82.524	19.136	46.611	1.000	31.73
ATOM	1465	O	LEU	A	217	81.996	20.132	46.107	1.000	23.72
ATOM	1466	N	ALA	A	218	81.886	18.401	47.526	1.000	29.13
ATOM	1467	CA	ALA	A	218	80.555	18.785	47.981	1.000	28.01
ATOM	1468	CB	ALA	A	218	80.007	17.826	49.035	1.000	24.11
ATOM	1469	C	ALA	A	218	80.565	20.188	48.568	1.000	24.33
ATOM	1470	O	ALA	A	218	79.656	20.984	48.355	1.000	24.23
ATOM	1471	N	SER	A	219	81.616	20.490	49.328	1.000	25.40
ATOM	1472	CA	SER	A	219	81.633	21.782	50.012	1.000	26.17
ATOM	1473	CB	SER	A	219	82.801	21.841	51.007	1.000	23.46
ATOM	1474	OG	SER	A	219	84.035	21.883	50.304	1.000	28.86
ATOM	1475	C	SER	A	219	81.731	22.929	49.026	1.000	28.77
ATOM	1476	O	SER	A	219	81.470	24.075	49.387	1.000	29.20
ATOM	1477	N	GLN	A	220	82.102	22.651	47.777	1.000	31.06
ATOM	1478	CA	GLN	A	220	82.336	23.755	46.850	1.000	28.95
ATOM	1479	CB	GLN	A	220	83.511	23.370	45.940	1.000	35.57
ATOM	1480	CG	GLN	A	220	84.805	23.152	46.713	1.000	46.25
ATOM	1481	CD	GLN	A	220	85.559	24.459	46.910	1.000	54.85
ATOM	1482	OE1	GLN	A	220	85.311	25.169	47.883	1.000	67.11
ATOM	1483	NE2	GLN	A	220	86.465	24.766	45.989	1.000	58.88
ATOM	1484	C	GLN	A	220	81.139	24.144	46.005	1.000	27.97
ATOM	1485	O	GLN	A	220	81.188	25.140	45.266	1.000	25.50
ATOM	1486	N	VAL	A	221	80.038	23.397	46.066	1.000	24.23
ATOM	1487	CA	VAL	A	221	78.877	23.801	45.257	1.000	19.71
ATOM	1488	CB	VAL	A	221	77.881	22.645	45.135	1.000	20.16
ATOM	1489	CG1	VAL	A	221	76.729	23.008	44.204	1.000	16.09
ATOM	1490	CG2	VAL	A	221	78.595	21.382	44.657	1.000	17.00
ATOM	1491	C	VAL	A	221	78.226	25.016	45.896	1.000	24.47
ATOM	1492	O	VAL	A	221	77.763	24.933	47.041	1.000	25.19
ATOM	1493	N	PRO	A	222	78.187	26.160	45.232	1.000	25.80
ATOM	1494	CD	PRO	A	222	78.681	26.411	43.859	1.000	24.80
ATOM	1495	CA	PRO	A	222	77.651	27.382	45.848	1.000	22.49
ATOM	1496	CB	PRO	A	222	77.602	28.367	44.666	1.000	18.73
ATOM	1497	CG	PRO	A	222	78.785	27.924	43.841	1.000	22.15
ATOM	1498	C	PRO	A	222	76.272	27.231	46.462	1.000	27.78
ATOM	1499	O	PRO	A	222	76.075	27.491	47.650	1.000	24.62
ATOM	1500	N	PHE	A	223	75.253	26.829	45.714	1.000	24.56
ATOM	1501	CA	PHE	A	223	73.945	26.652	46.334	1.000	20.97
ATOM	1502	CB	PHE	A	223	73.215	27.947	46.693	1.000	20.13
ATOM	1503	CG	PHE	A	223	71.883	27.618	47.370	1.000	25.97
ATOM	1504	CD1	PHE	A	223	71.850	27.192	48.687	1.000	28.70
ATOM	1505	CD2	PHE	A	223	70.688	27.728	46.689	1.000	22.64
ATOM	1506	CE1	PHE	A	223	70.654	26.880	49.320	1.000	25.50
ATOM	1507	CE2	PHE	A	223	69.488	27.424	47.313	1.000	25.33
ATOM	1508	CZ	PHE	A	223	69.464	26.993	48.629	1.000	22.68
ATOM	1509	C	PHE	A	223	73.057	25.813	45.415	1.000	26.48
ATOM	1510	O	PHE	A	223	72.918	26.178	44.248	1.000	24.24
ATOM	1511	N	PRO	A	224	72.466	24.733	45.911	1.000	28.80
ATOM	1512	CD	PRO	A	224	71.556	23.870	45.133	1.000	28.23
ATOM	1513	CA	PRO	A	224	72.625	24.268	47.290	1.000	29.22
ATOM	1514	CB	PRO	A	224	71.509	23.232	47.436	1.000	31.63
ATOM	1515	CG	PRO	A	224	71.279	22.721	46.058	1.000	29.47
ATOM	1516	C	PRO	A	224	73.982	23.602	47.531	1.000	28.36
ATOM	1517	O	PRO	A	224	74.550	22.999	46.621	1.000	22.58
ATOM	1518	N	SER	A	225	74.484	23.778	48.751	1.000	25.87
ATOM	1519	CA	SER	A	225	75.832	23.351	49.090	1.000	29.25
ATOM	1520	CB	SER	A	225	76.367	24.152	50.283	1.000	37.81

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ATOM   1521  OG  SER A 225      76.577  25.493  49.874 1.000 56.13
ATOM   1522  C   SER A 225      75.883  21.863  49.385 1.000 29.47
ATOM   1523  O   SER A 225      75.952  21.398  50.516 1.000 28.64
ATOM   1524  N   ARG A 226      75.850  21.105  48.293 1.000 23.34
ATOM   1525  CA  ARG A 226      75.876  19.658  48.378 1.000 21.20
ATOM   1526  CB  ARG A 226      74.594  19.134  49.026 1.000 20.65
ATOM   1527  CG  ARG A 226      73.340  19.637  48.306 1.000 20.10
ATOM   1528  CD  ARG A 226      72.203  18.633  48.397 1.000 23.97
ATOM   1529  NE  ARG A 226      70.932  19.239  47.978 1.000 23.27
ATOM   1530  CZ  ARG A 226      70.369  19.014  46.796 1.000 27.29
ATOM   1531  NH1 ARG A 226      69.219  19.600  46.488 1.000 20.66
ATOM   1532  NH2 ARG A 226      70.943  18.206  45.908 1.000 22.51
ATOM   1533  C   ARG A 226      76.007  19.083  46.972 1.000 24.78
ATOM   1534  O   ARG A 226      75.759  19.779  45.986 1.000 24.98
ATOM   1535  N   LEU A 227      76.368  17.812  46.899 1.000 21.08
ATOM   1536  CA  LEU A 227      76.314  17.125  45.617 1.000 25.85
ATOM   1537  CB  LEU A 227      76.849  15.701  45.778 1.000 25.37
ATOM   1538  CG  LEU A 227      78.246  15.581  46.398 1.000 24.53
ATOM   1539  CD1 LEU A 227      78.615  14.112  46.539 1.000 23.43
ATOM   1540  CD2 LEU A 227      79.254  16.352  45.562 1.000 19.26
ATOM   1541  C   LEU A 227      74.885  17.114  45.105 1.000 25.75
ATOM   1542  O   LEU A 227      73.932  17.166  45.890 1.000 21.27
ATOM   1543  N   GLY A 228      74.697  17.041  43.786 1.000 23.15
ATOM   1544  CA  GLY A 228      73.327  16.959  43.294 1.000 19.97
ATOM   1545  C   GLY A 228      72.747  15.590  43.606 1.000 21.85
ATOM   1546  O   GLY A 228      73.477  14.604  43.695 1.000 22.71
ATOM   1547  N   ASP A 229      71.423  15.532  43.766 1.000 23.70
ATOM   1548  CA  ASP A 229      70.781  14.228  43.962 1.000 21.75
ATOM   1549  CB  ASP A 229      69.594  14.376  44.909 1.000 25.58
ATOM   1550  CG  ASP A 229      69.011  13.036  45.317 1.000 37.77
ATOM   1551  OD1 ASP A 229      68.989  12.691  46.522 1.000 52.48
ATOM   1552  OD2 ASP A 229      68.565  12.322  44.393 1.000 37.02
ATOM   1553  C   ASP A 229      70.362  13.661  42.618 1.000 18.38
ATOM   1554  O   ASP A 229      69.795  14.402  41.817 1.000 21.95
ATOM   1555  N   PRO A 230      70.630  12.396  42.353 1.000 24.18
ATOM   1556  CD  PRO A 230      71.242  11.395  43.258 1.000 23.15
ATOM   1557  CA  PRO A 230      70.332  11.833  41.027 1.000 23.50
ATOM   1558  CB  PRO A 230      70.618  10.340  41.234 1.000 24.52
ATOM   1559  CG  PRO A 230      71.705  10.352  42.273 1.000 23.78
ATOM   1560  C   PRO A 230      68.895  12.054  40.589 1.000 26.53
ATOM   1561  O   PRO A 230      68.602  12.084  39.387 1.000 25.38
ATOM   1562  N   ALA A 231      67.961  12.207  41.528 1.000 26.35
ATOM   1563  CA  ALA A 231      66.579  12.467  41.116 1.000 26.18
ATOM   1564  CB  ALA A 231      65.608  12.325  42.280 1.000 21.25
ATOM   1565  C   ALA A 231      66.449  13.855  40.495 1.000 26.64
ATOM   1566  O   ALA A 231      65.546  14.075  39.678 1.000 26.06
ATOM   1567  N   GLU A 232      67.322  14.786  40.857 1.000 22.42
ATOM   1568  CA  GLU A 232      67.304  16.120  40.250 1.000 23.24
ATOM   1569  CB  GLU A 232      68.224  17.072  41.030 1.000 23.89
ATOM   1570  CG  GLU A 232      67.618  17.531  42.345 1.000 22.94
ATOM   1571  CD  GLU A 232      68.572  18.110  43.357 1.000 22.44
ATOM   1572  OE1 GLU A 232      69.783  17.800  43.363 1.000 22.54
ATOM   1573  OE2 GLU A 232      68.106  18.906  44.206 1.000 22.99
ATOM   1574  C   GLU A 232      67.677  16.041  38.772 1.000 21.16
ATOM   1575  O   GLU A 232      67.133  16.772  37.943 1.000 23.00
ATOM   1576  N   TYR A 233      68.600  15.162  38.418 1.000 18.83
ATOM   1577  CA  TYR A 233      68.921  14.913  37.015 1.000 21.13
ATOM   1578  CB  TYR A 233      70.096  13.937  36.893 1.000 19.96
ATOM   1579  CG  TYR A 233      70.437  13.521  35.475 1.000 21.89
ATOM   1580  CD1 TYR A 233      71.301  14.274  34.688 1.000 19.55
ATOM   1581  CE1 TYR A 233      71.606  13.877  33.393 1.000 18.37
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ATOM	1582	CD2	TYR	A	233	69.907	12.366	34.909	1.000	19.47
ATOM	1583	CE2	TYR	A	233	70.197	11.970	33.624	1.000	22.32
ATOM	1584	CZ	TYR	A	233	71.056	12.740	32.864	1.000	21.80
ATOM	1585	OH	TYR	A	233	71.345	12.329	31.579	1.000	22.58
ATOM	1586	C	TYR	A	233	67.693	14.366	36.285	1.000	27.74
ATOM	1587	O	TYR	A	233	67.365	14.803	35.181	1.000	27.25
ATOM	1588	N	ALA	A	234	67.043	13.382	36.903	1.000	23.68
ATOM	1589	CA	ALA	A	234	65.851	12.738	36.377	1.000	20.29
ATOM	1590	CB	ALA	A	234	65.349	11.677	37.349	1.000	23.40
ATOM	1591	C	ALA	A	234	64.740	13.744	36.094	1.000	20.45
ATOM	1592	O	ALA	A	234	64.060	13.659	35.066	1.000	25.13
ATOM	1593	N	HIS	A	235	64.545	14.693	37.004	1.000	19.46
ATOM	1594	CA	HIS	A	235	63.560	15.746	36.801	1.000	20.05
ATOM	1595	CB	HIS	A	235	63.490	16.680	38.008	1.000	20.64
ATOM	1596	CG	HIS	A	235	62.661	17.910	37.798	1.000	23.05
ATOM	1597	CD2	HIS	A	235	62.979	19.150	37.361	1.000	21.17
ATOM	1598	ND1	HIS	A	235	61.306	17.954	38.072	1.000	28.32
ATOM	1599	CE1	HIS	A	235	60.826	19.155	37.806	1.000	22.48
ATOM	1600	NE2	HIS	A	235	61.825	19.898	37.370	1.000	24.72
ATOM	1601	C	HIS	A	235	63.890	16.550	35.549	1.000	24.63
ATOM	1602	O	HIS	A	235	62.975	16.892	34.798	1.000	24.01
ATOM	1603	N	LEU	A	236	65.167	16.867	35.324	1.000	24.45
ATOM	1604	CA	LEU	A	236	65.509	17.681	34.160	1.000	22.07
ATOM	1605	CB	LEU	A	236	66.950	18.181	34.211	1.000	20.78
ATOM	1606	CG	LEU	A	236	67.404	19.047	33.026	1.000	18.62
ATOM	1607	CD1	LEU	A	236	66.428	20.196	32.799	1.000	16.03
ATOM	1608	CD2	LEU	A	236	68.809	19.579	33.252	1.000	16.04
ATOM	1609	C	LEU	A	236	65.266	16.903	32.866	1.000	21.70
ATOM	1610	O	LEU	A	236	64.772	17.483	31.900	1.000	20.42
ATOM	1611	N	VAL	A	237	65.582	15.617	32.841	1.000	21.20
ATOM	1612	CA	VAL	A	237	65.283	14.783	31.675	1.000	21.16
ATOM	1613	CB	VAL	A	237	65.712	13.318	31.863	1.000	23.98
ATOM	1614	CG1	VAL	A	237	65.154	12.454	30.730	1.000	23.53
ATOM	1615	CG2	VAL	A	237	67.225	13.178	31.928	1.000	21.01
ATOM	1616	C	VAL	A	237	63.789	14.818	31.361	1.000	24.81
ATOM	1617	O	VAL	A	237	63.371	14.951	30.208	1.000	23.68
ATOM	1618	N	GLN	A	238	62.942	14.701	32.383	1.000	22.85
ATOM	1619	CA	GLN	A	238	61.503	14.737	32.105	1.000	23.14
ATOM	1620	CB	GLN	A	238	60.680	14.420	33.355	1.000	27.65
ATOM	1621	CG	GLN	A	238	59.175	14.510	33.117	1.000	34.44
ATOM	1622	CD	GLN	A	238	58.382	14.022	34.313	1.000	45.36
ATOM	1623	OE1	GLN	A	238	58.910	13.369	35.216	1.000	44.78
ATOM	1624	NE2	GLN	A	238	57.091	14.335	34.341	1.000	41.18
ATOM	1625	C	GLN	A	238	61.074	16.092	31.546	1.000	20.15
ATOM	1626	O	GLN	A	238	60.265	16.158	30.626	1.000	28.26
ATOM	1627	N	ALA	A	239	61.625	17.165	32.104	1.000	16.27
ATOM	1628	CA	ALA	A	239	61.311	18.514	31.669	1.000	17.56
ATOM	1629	CB	ALA	A	239	62.049	19.520	32.536	1.000	21.61
ATOM	1630	C	ALA	A	239	61.664	18.722	30.198	1.000	22.67
ATOM	1631	O	ALA	A	239	60.942	19.377	29.457	1.000	23.10
ATOM	1632	N	ILE	A	240	62.790	18.165	29.781	1.000	20.80
ATOM	1633	CA	ILE	A	240	63.216	18.205	28.386	1.000	25.50
ATOM	1634	CB	ILE	A	240	64.683	17.734	28.278	1.000	23.55
ATOM	1635	CG2	ILE	A	240	65.037	17.338	26.860	1.000	20.26
ATOM	1636	CG1	ILE	A	240	65.683	18.769	28.827	1.000	17.72
ATOM	1637	CD1	ILE	A	240	67.073	18.186	28.998	1.000	19.57
ATOM	1638	C	ILE	A	240	62.314	17.348	27.511	1.000	26.46
ATOM	1639	O	ILE	A	240	61.916	17.735	26.411	1.000	21.98
ATOM	1640	N	ILE	A	241	61.969	16.155	27.992	1.000	21.35
ATOM	1641	CA	ILE	A	241	61.046	15.306	27.238	1.000	26.98
ATOM	1642	CB	ILE	A	241	60.734	13.972	27.940	1.000	27.84

ATOM	1643	CG2	ILE	A	241	59.573	13.265	27.244	1.000	23.88
ATOM	1644	CG1	ILE	A	241	61.926	13.023	28.066	1.000	22.84
ATOM	1645	CD1	ILE	A	241	61.693	11.863	29.011	1.000	20.80
ATOM	1646	C	ILE	A	241	59.739	16.056	26.990	1.000	27.61
ATOM	1647	O	ILE	A	241	59.144	16.033	25.913	1.000	24.04
ATOM	1648	N	GLU	A	242	59.286	16.746	28.036	1.000	21.41
ATOM	1649	CA	GLU	A	242	57.969	17.364	27.977	1.000	23.08
ATOM	1650	CB	GLU	A	242	57.499	17.647	29.408	1.000	22.57
ATOM	1651	CG	GLU	A	242	57.170	16.396	30.206	1.000	25.70
ATOM	1652	CD	GLU	A	242	56.396	16.747	31.475	1.000	31.32
ATOM	1653	OE1	GLU	A	242	55.646	15.891	31.987	1.000	41.56
ATOM	1654	OE2	GLU	A	242	56.553	17.892	31.951	1.000	38.20
ATOM	1655	C	GLU	A	242	57.936	18.649	27.170	1.000	27.56
ATOM	1656	O	GLU	A	242	56.914	18.945	26.552	1.000	24.92
ATOM	1657	N	ASN	A	243	59.015	19.426	27.170	1.000	22.75
ATOM	1658	CA	ASN	A	243	59.011	20.717	26.485	1.000	24.21
ATOM	1659	CB	ASN	A	243	59.999	21.671	27.156	1.000	21.86
ATOM	1660	CG	ASN	A	243	59.811	23.108	26.712	1.000	23.53
ATOM	1661	OD1	ASN	A	243	59.775	23.431	25.522	1.000	22.67
ATOM	1662	ND2	ASN	A	243	59.700	23.998	27.689	1.000	19.20
ATOM	1663	C	ASN	A	243	59.356	20.565	25.009	1.000	27.29
ATOM	1664	O	ASN	A	243	60.489	20.231	24.654	1.000	24.50
ATOM	1665	N	PRO	A	244	58.382	20.804	24.138	1.000	27.24
ATOM	1666	CD	PRO	A	244	57.005	21.238	24.434	1.000	24.08
ATOM	1667	CA	PRO	A	244	58.603	20.626	22.700	1.000	22.73
ATOM	1668	CB	PRO	A	244	57.222	20.911	22.084	1.000	23.36
ATOM	1669	CG	PRO	A	244	56.269	20.716	23.222	1.000	26.47
ATOM	1670	C	PRO	A	244	59.603	21.596	22.100	1.000	21.55
ATOM	1671	O	PRO	A	244	60.085	21.321	20.988	1.000	24.58
ATOM	1672	N	PHE	A	245	59.941	22.717	22.735	1.000	21.03
ATOM	1673	CA	PHE	A	245	60.793	23.659	21.993	1.000	19.57
ATOM	1674	CB	PHE	A	245	60.283	25.086	22.178	1.000	22.58
ATOM	1675	CG	PHE	A	245	60.458	26.021	20.995	1.000	18.83
ATOM	1676	CD1	PHE	A	245	61.118	27.224	21.130	1.000	17.04
ATOM	1677	CD2	PHE	A	245	59.957	25.695	19.742	1.000	18.90
ATOM	1678	CE1	PHE	A	245	61.281	28.103	20.068	1.000	19.82
ATOM	1679	CE2	PHE	A	245	60.103	26.548	18.663	1.000	16.29
ATOM	1680	CZ	PHE	A	245	60.767	27.749	18.832	1.000	18.24
ATOM	1681	C	PHE	A	245	62.263	23.549	22.388	1.000	25.70
ATOM	1682	O	PHE	A	245	63.087	24.304	21.873	1.000	19.98
ATOM	1683	N	LEU	A	246	62.630	22.635	23.279	1.000	23.56
ATOM	1684	CA	LEU	A	246	64.026	22.477	23.685	1.000	22.39
ATOM	1685	CB	LEU	A	246	64.141	21.902	25.102	1.000	21.56
ATOM	1686	CG	LEU	A	246	63.840	22.873	26.249	1.000	23.45
ATOM	1687	CD1	LEU	A	246	63.735	22.128	27.570	1.000	23.33
ATOM	1688	CD2	LEU	A	246	64.900	23.962	26.334	1.000	20.46
ATOM	1689	C	LEU	A	246	64.782	21.575	22.715	1.000	20.66
ATOM	1690	O	LEU	A	246	64.517	20.378	22.630	1.000	21.20
ATOM	1691	N	ASN	A	247	65.735	22.145	21.985	1.000	20.82
ATOM	1692	CA	ASN	A	247	66.483	21.349	21.010	1.000	21.25
ATOM	1693	CB	ASN	A	247	65.671	21.292	19.718	1.000	21.44
ATOM	1694	CG	ASN	A	247	66.084	20.187	18.770	1.000	27.16
ATOM	1695	OD1	ASN	A	247	66.899	19.328	19.096	1.000	20.56
ATOM	1696	ND2	ASN	A	247	65.498	20.210	17.569	1.000	22.46
ATOM	1697	C	ASN	A	247	67.862	21.932	20.741	1.000	19.13
ATOM	1698	O	ASN	A	247	68.019	23.151	20.747	1.000	18.86
ATOM	1699	N	GLY	A	248	68.861	21.095	20.493	1.000	19.82
ATOM	1700	CA	GLY	A	248	70.191	21.529	20.123	1.000	20.18
ATOM	1701	C	GLY	A	248	70.947	22.319	21.161	1.000	21.65
ATOM	1702	O	GLY	A	248	71.837	23.111	20.846	1.000	18.31
ATOM	1703	N	GLU	A	249	70.617	22.123	22.436	1.000	19.76

ATOM	1704	CA	GLU	A	249	71.193	22.933	23.512	1.000	15.34
ATOM	1705	CB	GLU	A	249	70.093	23.812	24.096	1.000	17.49
ATOM	1706	CG	GLU	A	249	70.339	24.393	25.479	1.000	18.34
ATOM	1707	CD	GLU	A	249	71.417	25.457	25.495	1.000	20.71
ATOM	1708	OE1	GLU	A	249	71.291	26.430	26.270	1.000	24.53
ATOM	1709	OE2	GLU	A	249	72.399	25.321	24.737	1.000	20.71
ATOM	1710	C	GLU	A	249	71.827	22.049	24.576	1.000	20.26
ATOM	1711	O	GLU	A	249	71.485	20.874	24.713	1.000	18.20
ATOM	1712	N	VAL	A	250	72.758	22.628	25.324	1.000	20.14
ATOM	1713	CA	VAL	A	250	73.423	21.963	26.444	1.000	15.45
ATOM	1714	CB	VAL	A	250	74.950	21.971	26.285	1.000	23.58
ATOM	1715	CG1	VAL	A	250	75.633	21.356	27.501	1.000	21.33
ATOM	1716	CG2	VAL	A	250	75.346	21.233	25.011	1.000	20.50
ATOM	1717	C	VAL	A	250	73.029	22.660	27.744	1.000	19.05
ATOM	1718	O	VAL	A	250	73.131	23.892	27.823	1.000	18.90
ATOM	1719	N	ILE	A	251	72.577	21.905	28.746	1.000	17.48
ATOM	1720	CA	ILE	A	251	72.115	22.552	29.977	1.000	19.87
ATOM	1721	CB	ILE	A	251	70.639	22.211	30.259	1.000	19.82
ATOM	1722	CG2	ILE	A	251	70.190	22.867	31.567	1.000	18.96
ATOM	1723	CG1	ILE	A	251	69.670	22.552	29.127	1.000	16.79
ATOM	1724	CD1	ILE	A	251	68.244	22.113	29.385	1.000	18.75
ATOM	1725	C	ILE	A	251	72.953	22.143	31.183	1.000	18.61
ATOM	1726	O	ILE	A	251	73.009	20.947	31.501	1.000	20.95
ATOM	1727	N	ARG	A	252	73.594	23.118	31.822	1.000	20.09
ATOM	1728	CA	ARG	A	252	74.390	22.869	33.018	1.000	20.43
ATOM	1729	CB	ARG	A	252	75.300	24.034	33.378	1.000	20.29
ATOM	1730	CG	ARG	A	252	76.386	24.442	32.411	1.000	22.69
ATOM	1731	CD	ARG	A	252	77.182	25.646	32.914	1.000	21.00
ATOM	1732	NE	ARG	A	252	77.981	25.296	34.078	1.000	19.89
ATOM	1733	CZ	ARG	A	252	79.304	25.251	34.157	1.000	21.01
ATOM	1734	NH1	ARG	A	252	79.896	24.909	35.293	1.000	16.77
ATOM	1735	NH2	ARG	A	252	80.069	25.543	33.114	1.000	20.53
ATOM	1736	C	ARG	A	252	73.453	22.609	34.208	1.000	19.55
ATOM	1737	O	ARG	A	252	72.587	23.437	34.488	1.000	15.60
ATOM	1738	N	LEU	A	253	73.623	21.494	34.897	1.000	19.36
ATOM	1739	CA	LEU	A	253	72.859	21.189	36.109	1.000	18.74
ATOM	1740	CB	LEU	A	253	71.984	19.960	35.898	1.000	17.63
ATOM	1741	CG	LEU	A	253	71.116	19.524	37.089	1.000	20.75
ATOM	1742	CD1	LEU	A	253	70.028	20.566	37.333	1.000	14.44
ATOM	1743	CD2	LEU	A	253	70.514	18.148	36.872	1.000	14.92
ATOM	1744	C	LEU	A	253	73.854	20.999	37.247	1.000	21.59
ATOM	1745	O	LEU	A	253	74.367	19.906	37.465	1.000	19.92
ATOM	1746	N	ASP	A	254	74.167	22.074	37.971	1.000	19.83
ATOM	1747	CA	ASP	A	254	75.366	22.050	38.791	1.000	19.66
ATOM	1748	CB	ASP	A	254	76.544	22.469	37.883	1.000	15.11
ATOM	1749	CG	ASP	A	254	76.311	23.832	37.262	1.000	21.56
ATOM	1750	OD1	ASP	A	254	75.354	24.535	37.673	1.000	18.87
ATOM	1751	OD2	ASP	A	254	77.085	24.205	36.351	1.000	22.35
ATOM	1752	C	ASP	A	254	75.369	22.971	39.994	1.000	20.87
ATOM	1753	O	ASP	A	254	76.442	23.142	40.582	1.000	23.02
ATOM	1754	N	GLY	A	255	74.248	23.582	40.371	1.000	21.44
ATOM	1755	CA	GLY	A	255	74.249	24.391	41.590	1.000	17.40
ATOM	1756	C	GLY	A	255	75.152	25.600	41.497	1.000	24.03
ATOM	1757	O	GLY	A	255	75.619	26.088	42.529	1.000	20.64
ATOM	1758	N	ALA	A	256	75.377	26.065	40.270	1.000	23.32
ATOM	1759	CA	ALA	A	256	76.148	27.265	39.972	1.000	21.34
ATOM	1760	CB	ALA	A	256	75.654	28.440	40.814	1.000	18.73
ATOM	1761	C	ALA	A	256	77.646	27.063	40.179	1.000	19.83
ATOM	1762	O	ALA	A	256	78.420	28.029	40.229	1.000	19.19
ATOM	1763	N	ILE	A	257	78.106	25.815	40.309	1.000	17.99
ATOM	1764	CA	ILE	A	257	79.550	25.652	40.528	1.000	19.13

ATOM	1765	CB	ILE	A	257	79.893	24.238	41.020	1.000	18.18
ATOM	1766	CG2	ILE	A	257	79.829	23.235	39.875	1.000	23.53
ATOM	1767	CG1	ILE	A	257	81.250	24.126	41.723	1.000	18.23
ATOM	1768	CD1	ILE	A	257	81.531	22.750	42.290	1.000	16.33
ATOM	1769	C	ILE	A	257	80.337	25.944	39.250	1.000	24.61
ATOM	1770	O	ILE	A	257	79.827	25.788	38.139	1.000	17.90
ATOM	1771	N	ARG	A	258	81.583	26.366	39.421	1.000	21.54
ATOM	1772	CA	ARG	A	258	82.544	26.437	38.321	1.000	18.05
ATOM	1773	CB	ARG	A	258	82.840	27.868	37.900	1.000	17.08
ATOM	1774	CG	ARG	A	258	81.674	28.634	37.304	1.000	18.32
ATOM	1775	CD	ARG	A	258	81.189	27.958	36.030	1.000	21.14
ATOM	1776	NE	ARG	A	258	80.078	28.673	35.403	1.000	21.78
ATOM	1777	CZ	ARG	A	258	78.799	28.476	35.694	1.000	22.43
ATOM	1778	NH1	ARG	A	258	77.865	29.176	35.066	1.000	18.08
ATOM	1779	NH2	ARG	A	258	78.461	27.578	36.615	1.000	18.74
ATOM	1780	C	ARG	A	258	83.813	25.725	38.774	1.000	21.78
ATOM	1781	O	ARG	A	258	84.418	26.130	39.766	1.000	21.81
ATOM	1782	N	MET	A	259	84.246	24.671	38.100	1.000	21.16
ATOM	1783	CA	MET	A	259	85.366	23.892	38.637	1.000	23.09
ATOM	1784	CB	MET	A	259	85.406	22.519	37.953	1.000	23.03
ATOM	1785	CG	MET	A	259	84.099	21.752	38.058	1.000	26.30
ATOM	1786	SD	MET	A	259	83.442	21.712	39.743	1.000	27.07
ATOM	1787	CE	MET	A	259	84.624	20.636	40.546	1.000	26.15
ATOM	1788	C	MET	A	259	86.723	24.564	38.505	1.000	29.45
ATOM	1789	O	MET	A	259	87.113	25.112	37.473	1.000	28.26
ATOM	1790	N	GLN	A	260	87.485	24.505	39.594	1.000	29.83
ATOM	1791	CA	GLN	A	260	88.838	25.069	39.623	1.000	25.68
ATOM	1792	CB	GLN	A	260	89.054	25.670	41.014	1.000	30.10
ATOM	1793	CG	GLN	A	260	88.941	27.172	41.032	1.000	43.43
ATOM	1794	CD	GLN	A	260	89.302	27.935	39.784	1.000	50.49
ATOM	1795	OE1	GLN	A	260	90.325	28.634	39.755	1.000	40.10
ATOM	1796	NE2	GLN	A	260	88.520	27.897	38.714	1.000	67.81
ATOM	1797	C	GLN	A	260	89.862	24.012	39.243	1.000	24.65
ATOM	1798	O	GLN	A	260	89.449	22.852	39.076	1.000	22.12
ATOM	1799	N	PRO	A	261	91.136	24.340	39.072	1.000	22.80
ATOM	1800	CD	PRO	A	261	91.766	25.666	39.162	1.000	26.19
ATOM	1801	CA	PRO	A	261	92.121	23.308	38.708	1.000	22.38
ATOM	1802	CB	PRO	A	261	93.465	24.021	38.882	1.000	23.53
ATOM	1803	CG	PRO	A	261	93.140	25.448	38.596	1.000	27.38
ATOM	1804	C	PRO	A	261	92.074	22.109	39.643	1.000	23.33
ATOM	1805	OT1	PRO	A	261	92.038	22.366	40.861	1.000	26.80
ATOM	1806	OT2	PRO	A	261	92.043	20.977	39.140	1.000	24.26
ATOM	1807	PN	LIG	A	262	76.866	8.049	36.850	1.000	21.10
ATOM	1808	O1N	LIG	A	262	77.161	9.214	37.816	1.000	19.63
ATOM	1809	O2N	LIG	A	262	75.412	7.604	36.951	1.000	20.28
ATOM	1810	O3P	LIG	A	262	77.863	6.917	37.203	1.000	23.34
ATOM	1811	O5M	LIG	A	262	77.188	8.537	35.356	1.000	26.86
ATOM	1812	C5M	LIG	A	262	76.146	8.614	34.334	1.000	23.59
ATOM	1813	C4M	LIG	A	262	76.601	9.638	33.228	1.000	23.45
ATOM	1814	O4M	LIG	A	262	76.662	10.947	33.848	1.000	26.65
ATOM	1815	C3M	LIG	A	262	78.028	9.344	32.697	1.000	24.43
ATOM	1816	O3M	LIG	A	262	78.068	9.688	31.290	1.000	32.36
ATOM	1817	C2M	LIG	A	262	78.922	10.273	33.544	1.000	19.91
ATOM	1818	O2M	LIG	A	262	80.125	10.601	32.794	1.000	18.63
ATOM	1819	C1M	LIG	A	262	77.987	11.498	33.713	1.000	19.38
ATOM	1820	N1N	LIG	A	262	78.345	12.467	34.776	1.000	15.56
ATOM	1821	C6N	LIG	A	262	78.804	13.791	34.353	1.000	11.07
ATOM	1822	C5N	LIG	A	262	79.102	14.736	35.267	1.000	22.79
ATOM	1823	C4N	LIG	A	262	79.372	14.335	36.735	1.000	20.14
ATOM	1824	C3N	LIG	A	262	78.582	13.044	37.131	1.000	15.94
ATOM	1825	C2N	LIG	A	262	78.264	12.124	36.205	1.000	19.61

ATOM	1826	C7N	LIG	A	262	78.486	12.780	38.627	1.000	18.21
ATOM	1827	O7N	LIG	A	262	78.848	13.651	39.435	1.000	24.82
ATOM	1828	N7N	LIG	A	262	78.006	11.610	38.987	1.000	18.62
ATOM	1829	PA	LIG	A	262	77.561	5.422	37.391	1.000	28.11
ATOM	1830	O1A	LIG	A	262	78.894	4.662	37.439	1.000	22.53
ATOM	1831	O2A	LIG	A	262	76.764	5.153	38.682	1.000	33.29
ATOM	1832	O5B	LIG	A	262	76.695	4.845	36.178	1.000	28.65
ATOM	1833	C5B	LIG	A	262	77.355	4.504	34.932	1.000	32.11
ATOM	1834	C4B	LIG	A	262	76.714	3.251	34.284	1.000	27.97
ATOM	1835	O4B	LIG	A	262	77.188	3.143	32.914	1.000	32.15
ATOM	1836	C3B	LIG	A	262	77.031	1.916	35.013	1.000	25.46
ATOM	1837	O3B	LIG	A	262	75.811	1.148	35.157	1.000	32.29
ATOM	1838	C2B	LIG	A	262	77.960	1.198	34.001	1.000	26.52
ATOM	1839	O2B	LIG	A	262	77.862	-0.237	34.126	1.000	31.44
ATOM	1840	C1B	LIG	A	262	77.427	1.738	32.649	1.000	33.69
ATOM	1841	N9A	LIG	A	262	78.396	1.552	31.519	1.000	27.56
ATOM	1842	C4A	LIG	A	262	78.161	1.003	30.254	1.000	22.23
ATOM	1843	N3A	LIG	A	262	76.989	0.455	29.579	1.000	25.87
ATOM	1844	C2A	LIG	A	262	77.176	0.033	28.351	1.000	26.73
ATOM	1845	N1A	LIG	A	262	78.279	0.037	27.632	1.000	27.79
ATOM	1846	C6A	LIG	A	262	79.396	0.518	28.154	1.000	27.44
ATOM	1847	C5A	LIG	A	262	79.411	1.038	29.510	1.000	22.37
ATOM	1848	N7A	LIG	A	262	80.444	1.588	30.265	1.000	23.23
ATOM	1849	C8A	LIG	A	262	79.747	1.856	31.414	1.000	20.75
ATOM	1850	N6A	LIG	A	262	80.554	0.221	27.558	1.000	28.05
ATOM	1851	C	LIG	A	262	86.532	12.596	38.895	1.000	36.33
ATOM	1852	C1	LIG	A	262	87.716	13.547	38.393	1.000	43.35
ATOM	1853	N	LIG	A	262	88.747	13.908	39.257	1.000	45.45
ATOM	1854	O	LIG	A	262	87.661	13.937	37.206	1.000	50.12
ATOM	1855	C2	LIG	A	262	88.763	13.383	40.662	1.000	45.14
ATOM	1856	C3	LIG	A	262	88.417	14.342	41.834	1.000	39.71
ATOM	1857	C4	LIG	A	262	89.819	14.827	38.761	1.000	44.30
ATOM	1858	C5	LIG	A	262	89.602	16.294	39.221	1.000	48.68
ATOM	1859	C6	LIG	A	262	89.419	16.470	40.739	1.000	52.16
ATOM	1860	C7	LIG	A	262	88.192	15.801	41.385	1.000	48.56
ATOM	1861	C8	LIG	A	262	86.919	11.070	38.927	1.000	37.05
ATOM	1862	C9	LIG	A	262	86.039	10.178	39.567	1.000	40.45
ATOM	1863	C10	LIG	A	262	86.308	8.812	39.624	1.000	35.05
ATOM	1864	C11	LIG	A	262	87.482	8.325	39.053	1.000	33.43
ATOM	1865	C12	LIG	A	262	88.359	9.191	38.406	1.000	34.29
ATOM	1866	C13	LIG	A	262	88.092	10.560	38.358	1.000	32.93
ATOM	1867	C15	LIG	A	262	84.992	12.198	37.018	1.000	31.80
ATOM	1868	N1	LIG	A	262	83.945	12.171	36.253	1.000	35.97
ATOM	1869	C16	LIG	A	262	82.786	12.926	36.676	1.000	26.22
ATOM	1870	C17	LIG	A	262	82.816	13.642	37.893	1.000	27.12
ATOM	1871	C18	LIG	A	262	84.093	13.620	38.766	1.000	30.03
ATOM	1872	N2	LIG	A	262	85.193	12.803	38.165	1.000	35.96
ATOM	1873	S	LIG	A	262	84.095	14.537	40.290	1.000	29.89
ATOM	1874	C19	LIG	A	262	81.624	14.284	38.089	1.000	27.34
ATOM	1875	N3	LIG	A	262	80.834	13.998	36.974	1.000	26.99
ATOM	1876	N4	LIG	A	262	81.533	13.152	36.151	1.000	21.47
ATOM	1877	CB	SER	B	7	111.935	37.270	18.577	1.000	66.13
ATOM	1878	C	SER	B	7	110.628	35.164	18.813	1.000	46.22
ATOM	1879	O	SER	B	7	110.939	34.462	19.779	1.000	51.08
ATOM	1880	N	SER	B	7	110.142	37.116	20.244	1.000	60.83
ATOM	1881	CA	SER	B	7	110.571	36.681	18.917	1.000	52.01
ATOM	1882	N	VAL	B	8	110.333	34.638	17.623	1.000	39.96
ATOM	1883	CA	VAL	B	8	110.396	33.185	17.459	1.000	36.17
ATOM	1884	CB	VAL	B	8	109.250	32.662	16.582	1.000	37.32
ATOM	1885	CG1	VAL	B	8	107.898	33.067	17.159	1.000	31.50
ATOM	1886	CG2	VAL	B	8	109.400	33.182	15.161	1.000	28.98

ATOM	1887	C	VAL	B	8	111.745	32.781	16.869	1.000	30.70
ATOM	1888	O	VAL	B	8	112.019	31.602	16.641	1.000	35.02
ATOM	1889	N	LYS	B	9	112.596	33.767	16.617	1.000	27.16
ATOM	1890	CA	LYS	B	9	113.944	33.473	16.135	1.000	30.39
ATOM	1891	CB	LYS	B	9	114.753	34.756	15.991	1.000	29.44
ATOM	1892	C	LYS	B	9	114.635	32.490	17.073	1.000	32.76
ATOM	1893	O	LYS	B	9	114.688	32.689	18.289	1.000	35.63
ATOM	1894	N	GLY	B	10	115.160	31.399	16.527	1.000	33.78
ATOM	1895	CA	GLY	B	10	115.891	30.436	17.329	1.000	33.33
ATOM	1896	C	GLY	B	10	115.042	29.382	17.990	1.000	32.26
ATOM	1897	O	GLY	B	10	115.570	28.369	18.453	1.000	38.86
ATOM	1898	N	LEU	B	11	113.729	29.580	18.047	1.000	28.07
ATOM	1899	CA	LEU	B	11	112.840	28.565	18.607	1.000	23.95
ATOM	1900	CB	LEU	B	11	111.455	29.191	18.812	1.000	26.82
ATOM	1901	CG	LEU	B	11	111.409	30.356	19.811	1.000	33.74
ATOM	1902	CD1	LEU	B	11	110.025	30.980	19.884	1.000	39.05
ATOM	1903	CD2	LEU	B	11	111.848	29.890	21.194	1.000	29.81
ATOM	1904	C	LEU	B	11	112.747	27.342	17.707	1.000	23.70
ATOM	1905	O	LEU	B	11	112.922	27.452	16.490	1.000	26.55
ATOM	1906	N	VAL	B	12	112.476	26.173	18.268	1.000	22.02
ATOM	1907	CA	VAL	B	12	112.260	24.944	17.510	1.000	24.81
ATOM	1908	CB	VAL	B	12	113.162	23.803	18.016	1.000	26.08
ATOM	1909	CG1	VAL	B	12	112.893	22.513	17.258	1.000	24.44
ATOM	1910	CG2	VAL	B	12	114.632	24.197	17.897	1.000	26.10
ATOM	1911	C	VAL	B	12	110.804	24.489	17.581	1.000	28.66
ATOM	1912	O	VAL	B	12	110.278	24.226	18.666	1.000	26.85
ATOM	1913	N	ALA	B	13	110.140	24.380	16.440	1.000	26.46
ATOM	1914	CA	ALA	B	13	108.743	23.981	16.366	1.000	26.62
ATOM	1915	CB	ALA	B	13	107.929	25.058	15.643	1.000	22.29
ATOM	1916	C	ALA	B	13	108.521	22.657	15.653	1.000	25.93
ATOM	1917	O	ALA	B	13	109.050	22.444	14.556	1.000	27.28
ATOM	1918	N	VAL	B	14	107.735	21.790	16.277	1.000	17.65
ATOM	1919	CA	VAL	B	14	107.277	20.556	15.655	1.000	20.86
ATOM	1920	CB	VAL	B	14	107.358	19.366	16.617	1.000	22.80
ATOM	1921	CG1	VAL	B	14	106.621	18.133	16.114	1.000	19.92
ATOM	1922	CG2	VAL	B	14	108.824	19.012	16.861	1.000	22.22
ATOM	1923	C	VAL	B	14	105.849	20.790	15.160	1.000	27.03
ATOM	1924	O	VAL	B	14	104.970	21.108	15.963	1.000	25.82
ATOM	1925	N	ILE	B	15	105.610	20.658	13.868	1.000	26.11
ATOM	1926	CA	ILE	B	15	104.313	20.975	13.264	1.000	24.37
ATOM	1927	CB	ILE	B	15	104.478	22.167	12.296	1.000	26.30
ATOM	1928	CG2	ILE	B	15	103.173	22.574	11.630	1.000	22.89
ATOM	1929	CG1	ILE	B	15	105.139	23.381	12.966	1.000	25.67
ATOM	1930	CD1	ILE	B	15	105.607	24.422	11.979	1.000	30.46
ATOM	1931	C	ILE	B	15	103.704	19.784	12.549	1.000	23.69
ATOM	1932	O	ILE	B	15	104.196	19.329	11.517	1.000	22.43
ATOM	1933	N	THR	B	16	102.611	19.249	13.089	1.000	22.07
ATOM	1934	CA	THR	B	16	101.905	18.147	12.451	1.000	22.03
ATOM	1935	CB	THR	B	16	101.071	17.349	13.471	1.000	21.22
ATOM	1936	OG1	THR	B	16	99.840	18.027	13.733	1.000	23.42
ATOM	1937	CG2	THR	B	16	101.799	17.252	14.806	1.000	16.43
ATOM	1938	C	THR	B	16	101.012	18.664	11.324	1.000	17.32
ATOM	1939	O	THR	B	16	100.520	19.792	11.351	1.000	22.26
ATOM	1940	N	GLY	B	17	100.795	17.843	10.306	1.000	20.98
ATOM	1941	CA	GLY	B	17	100.165	18.276	9.067	1.000	21.27
ATOM	1942	C	GLY	B	17	101.035	19.294	8.350	1.000	25.39
ATOM	1943	O	GLY	B	17	100.598	20.121	7.545	1.000	22.63
ATOM	1944	N	GLY	B	18	102.337	19.254	8.646	1.000	23.37
ATOM	1945	CA	GLY	B	18	103.254	20.254	8.127	1.000	20.34
ATOM	1946	C	GLY	B	18	103.480	20.154	6.629	1.000	21.06
ATOM	1947	O	GLY	B	18	104.077	21.066	6.057	1.000	22.45

ATOM	1948	N	ALA	B	19	103.026	19.092	5.966	1.000	21.71
ATOM	1949	CA	ALA	B	19	103.241	18.974	4.525	1.000	23.71
ATOM	1950	CB	ALA	B	19	103.100	17.520	4.099	1.000	21.03
ATOM	1951	C	ALA	B	19	102.286	19.849	3.726	1.000	29.96
ATOM	1952	O	ALA	B	19	102.472	20.117	2.538	1.000	27.73
ATOM	1953	N	SER	B	20	101.225	20.333	4.367	1.000	23.76
ATOM	1954	CA	SER	B	20	100.184	21.004	3.590	1.000	22.85
ATOM	1955	CB	SER	B	20	99.207	19.923	3.103	1.000	26.71
ATOM	1956	OG	SER	B	20	98.093	20.470	2.425	1.000	31.44
ATOM	1957	C	SER	B	20	99.454	22.065	4.395	1.000	29.26
ATOM	1958	O	SER	B	20	99.625	22.195	5.609	1.000	27.20
ATOM	1959	N	GLY	B	21	98.634	22.827	3.687	1.000	26.85
ATOM	1960	CA	GLY	B	21	97.667	23.751	4.207	1.000	22.83
ATOM	1961	C	GLY	B	21	98.094	24.570	5.391	1.000	26.72
ATOM	1962	O	GLY	B	21	99.054	25.337	5.312	1.000	19.24
ATOM	1963	N	LEU	B	22	97.365	24.441	6.509	1.000	22.57
ATOM	1964	CA	LEU	B	22	97.659	25.336	7.627	1.000	22.91
ATOM	1965	CB	LEU	B	22	96.548	25.233	8.679	1.000	24.42
ATOM	1966	CG	LEU	B	22	95.151	25.647	8.208	1.000	20.85
ATOM	1967	CD1	LEU	B	22	94.133	25.482	9.327	1.000	15.35
ATOM	1968	CD2	LEU	B	22	95.161	27.077	7.699	1.000	20.68
ATOM	1969	C	LEU	B	22	99.028	25.041	8.237	1.000	19.89
ATOM	1970	O	LEU	B	22	99.782	25.970	8.539	1.000	25.67
ATOM	1971	N	GLY	B	23	99.359	23.766	8.424	1.000	22.60
ATOM	1972	CA	GLY	B	23	100.651	23.436	9.030	1.000	27.37
ATOM	1973	C	GLY	B	23	101.807	23.934	8.185	1.000	25.30
ATOM	1974	O	GLY	B	23	102.762	24.548	8.660	1.000	21.48
ATOM	1975	N	LEU	B	24	101.703	23.677	6.878	1.000	23.68
ATOM	1976	CA	LEU	B	24	102.735	24.155	5.959	1.000	20.25
ATOM	1977	CB	LEU	B	24	102.420	23.731	4.528	1.000	21.69
ATOM	1978	CG	LEU	B	24	103.390	24.209	3.444	1.000	23.32
ATOM	1979	CD1	LEU	B	24	104.833	23.871	3.784	1.000	23.41
ATOM	1980	CD2	LEU	B	24	103.000	23.591	2.103	1.000	25.33
ATOM	1981	C	LEU	B	24	102.892	25.663	6.030	1.000	20.67
ATOM	1982	O	LEU	B	24	104.013	26.176	6.115	1.000	24.35
ATOM	1983	N	ALA	B	25	101.772	26.390	6.006	1.000	24.78
ATOM	1984	CA	ALA	B	25	101.832	27.851	6.098	1.000	20.17
ATOM	1985	CB	ALA	B	25	100.444	28.459	6.025	1.000	18.79
ATOM	1986	C	ALA	B	25	102.528	28.289	7.381	1.000	24.83
ATOM	1987	O	ALA	B	25	103.263	29.274	7.409	1.000	27.08
ATOM	1988	N	THR	B	26	102.283	27.539	8.455	1.000	23.74
ATOM	1989	CA	THR	B	26	102.908	27.892	9.733	1.000	23.95
ATOM	1990	CB	THR	B	26	102.271	27.065	10.862	1.000	27.15
ATOM	1991	OG1	THR	B	26	100.870	27.390	10.918	1.000	20.96
ATOM	1992	CG2	THR	B	26	102.862	27.405	12.213	1.000	14.50
ATOM	1993	C	THR	B	26	104.415	27.688	9.653	1.000	21.31
ATOM	1994	O	THR	B	26	105.202	28.552	10.040	1.000	23.66
ATOM	1995	N	ALA	B	27	104.825	26.540	9.126	1.000	19.96
ATOM	1996	CA	ALA	B	27	106.248	26.260	8.935	1.000	25.17
ATOM	1997	CB	ALA	B	27	106.418	24.912	8.249	1.000	25.01
ATOM	1998	C	ALA	B	27	106.931	27.354	8.126	1.000	26.74
ATOM	1999	O	ALA	B	27	107.949	27.905	8.542	1.000	27.61
ATOM	2000	N	GLU	B	28	106.372	27.679	6.963	1.000	24.69
ATOM	2001	CA	GLU	B	28	106.950	28.704	6.105	1.000	25.04
ATOM	2002	CB	GLU	B	28	106.027	28.975	4.911	1.000	26.62
ATOM	2003	CG	GLU	B	28	106.168	27.956	3.796	1.000	29.46
ATOM	2004	CD	GLU	B	28	105.090	28.019	2.739	1.000	34.48
ATOM	2005	OE1	GLU	B	28	105.230	27.290	1.733	1.000	37.01
ATOM	2006	OE2	GLU	B	28	104.104	28.772	2.894	1.000	38.70
ATOM	2007	C	GLU	B	28	107.196	29.999	6.861	1.000	28.38
ATOM	2008	O	GLU	B	28	108.280	30.567	6.830	1.000	22.48

ATOM	2009	N	ARG	B	29	106.170	30.468	7.572	1.000	26.36
ATOM	2010	CA	ARG	B	29	106.300	31.722	8.295	1.000	27.51
ATOM	2011	CB	ARG	B	29	104.930	32.181	8.837	1.000	22.39
ATOM	2012	CG	ARG	B	29	105.045	33.565	9.447	1.000	23.62
ATOM	2013	CD	ARG	B	29	103.721	34.034	10.040	1.000	26.86
ATOM	2014	NE	ARG	B	29	103.902	35.402	10.544	1.000	28.00
ATOM	2015	CZ	ARG	B	29	103.723	36.469	9.770	1.000	30.37
ATOM	2016	NH1	ARG	B	29	103.907	37.674	10.276	1.000	29.53
ATOM	2017	NH2	ARG	B	29	103.359	36.297	8.506	1.000	28.65
ATOM	2018	C	ARG	B	29	107.291	31.618	9.444	1.000	28.71
ATOM	2019	O	ARG	B	29	108.116	32.510	9.652	1.000	29.86
ATOM	2020	N	LEU	B	30	107.236	30.533	10.224	1.000	24.31
ATOM	2021	CA	LEU	B	30	108.179	30.478	11.349	1.000	26.41
ATOM	2022	CB	LEU	B	30	107.813	29.347	12.302	1.000	23.96
ATOM	2023	CG	LEU	B	30	106.436	29.430	12.973	1.000	23.79
ATOM	2024	CD1	LEU	B	30	106.267	28.268	13.944	1.000	17.95
ATOM	2025	CD2	LEU	B	30	106.228	30.765	13.668	1.000	24.22
ATOM	2026	C	LEU	B	30	109.616	30.343	10.853	1.000	31.93
ATOM	2027	O	LEU	B	30	110.527	31.003	11.357	1.000	30.60
ATOM	2028	N	VAL	B	31	109.840	29.485	9.858	1.000	26.74
ATOM	2029	CA	VAL	B	31	111.190	29.383	9.287	1.000	31.33
ATOM	2030	CB	VAL	B	31	111.255	28.275	8.221	1.000	34.12
ATOM	2031	CG1	VAL	B	31	112.445	28.443	7.291	1.000	40.80
ATOM	2032	CG2	VAL	B	31	111.305	26.915	8.908	1.000	27.68
ATOM	2033	C	VAL	B	31	111.609	30.722	8.705	1.000	32.48
ATOM	2034	O	VAL	B	31	112.725	31.203	8.897	1.000	33.88
ATOM	2035	N	GLY	B	32	110.692	31.370	7.982	1.000	24.58
ATOM	2036	CA	GLY	B	32	110.995	32.685	7.451	1.000	26.48
ATOM	2037	C	GLY	B	32	111.368	33.677	8.531	1.000	33.49
ATOM	2038	O	GLY	B	32	112.062	34.657	8.266	1.000	31.55
ATOM	2039	N	GLN	B	33	110.918	33.443	9.760	1.000	37.11
ATOM	2040	CA	GLN	B	33	111.183	34.351	10.868	1.000	35.69
ATOM	2041	CB	GLN	B	33	109.978	34.440	11.811	1.000	41.00
ATOM	2042	CG	GLN	B	33	108.656	34.800	11.155	1.000	43.78
ATOM	2043	CD	GLN	B	33	108.409	36.287	11.106	1.000	45.96
ATOM	2044	OE1	GLN	B	33	108.660	36.975	12.095	1.000	56.75
ATOM	2045	NE2	GLN	B	33	107.927	36.777	9.972	1.000	58.65
ATOM	2046	C	GLN	B	33	112.390	33.917	11.688	1.000	33.13
ATOM	2047	O	GLN	B	33	112.636	34.505	12.745	1.000	32.32
ATOM	2048	N	GLY	B	34	113.148	32.913	11.256	1.000	30.65
ATOM	2049	CA	GLY	B	34	114.338	32.544	12.011	1.000	30.69
ATOM	2050	C	GLY	B	34	114.173	31.350	12.916	1.000	33.53
ATOM	2051	O	GLY	B	34	115.124	30.941	13.593	1.000	34.90
ATOM	2052	N	ALA	B	35	112.994	30.732	12.972	1.000	28.17
ATOM	2053	CA	ALA	B	35	112.817	29.534	13.781	1.000	24.02
ATOM	2054	CB	ALA	B	35	111.343	29.442	14.168	1.000	27.36
ATOM	2055	C	ALA	B	35	113.262	28.268	13.064	1.000	24.80
ATOM	2056	O	ALA	B	35	113.543	28.284	11.863	1.000	29.10
ATOM	2057	N	SER	B	36	113.339	27.139	13.766	1.000	21.95
ATOM	2058	CA	SER	B	36	113.601	25.861	13.109	1.000	31.07
ATOM	2059	CB	SER	B	36	114.705	25.069	13.814	1.000	28.05
ATOM	2060	OG	SER	B	36	115.900	25.829	13.875	1.000	35.09
ATOM	2061	C	SER	B	36	112.323	25.037	13.067	1.000	33.10
ATOM	2062	O	SER	B	36	111.495	25.123	13.982	1.000	29.14
ATOM	2063	N	ALA	B	37	112.102	24.227	12.030	1.000	28.97
ATOM	2064	CA	ALA	B	37	110.812	23.522	12.032	1.000	28.78
ATOM	2065	CB	ALA	B	37	109.801	24.213	11.123	1.000	28.35
ATOM	2066	C	ALA	B	37	110.956	22.066	11.632	1.000	28.14
ATOM	2067	O	ALA	B	37	111.725	21.696	10.746	1.000	31.18
ATOM	2068	N	VAL	B	38	110.170	21.241	12.323	1.000	25.45
ATOM	2069	CA	VAL	B	38	110.026	19.846	11.961	1.000	22.16

ATOM	2070	CB	VAL	B	38	110.207	18.872	13.132	1.000	25.04
ATOM	2071	CG1	VAL	B	38	110.049	17.452	12.602	1.000	24.40
ATOM	2072	CG2	VAL	B	38	111.554	19.045	13.807	1.000	33.39
ATOM	2073	C	VAL	B	38	108.629	19.628	11.377	1.000	27.42
ATOM	2074	O	VAL	B	38	107.645	19.860	12.081	1.000	28.93
ATOM	2075	N	LEU	B	39	108.584	19.205	10.125	1.000	26.52
ATOM	2076	CA	LEU	B	39	107.331	18.890	9.462	1.000	25.31
ATOM	2077	CB	LEU	B	39	107.440	19.084	7.947	1.000	22.95
ATOM	2078	CG	LEU	B	39	108.057	20.391	7.464	1.000	21.80
ATOM	2079	CD1	LEU	B	39	107.904	20.508	5.951	1.000	22.36
ATOM	2080	CD2	LEU	B	39	107.425	21.579	8.178	1.000	22.97
ATOM	2081	C	LEU	B	39	106.914	17.455	9.749	1.000	25.46
ATOM	2082	O	LEU	B	39	107.489	16.500	9.232	1.000	26.63
ATOM	2083	N	LEU	B	40	105.897	17.315	10.591	1.000	23.83
ATOM	2084	CA	LEU	B	40	105.426	15.985	10.972	1.000	21.42
ATOM	2085	CB	LEU	B	40	105.097	15.966	12.470	1.000	18.48
ATOM	2086	CG	LEU	B	40	105.036	14.599	13.150	1.000	25.45
ATOM	2087	CD1	LEU	B	40	105.258	14.749	14.649	1.000	26.21
ATOM	2088	CD2	LEU	B	40	103.719	13.884	12.872	1.000	26.04
ATOM	2089	C	LEU	B	40	104.218	15.623	10.120	1.000	28.34
ATOM	2090	O	LEU	B	40	103.156	16.248	10.223	1.000	25.37
ATOM	2091	N	ASP	B	41	104.353	14.609	9.267	1.000	28.65
ATOM	2092	CA	ASP	B	41	103.254	14.287	8.354	1.000	26.00
ATOM	2093	CB	ASP	B	41	103.214	15.303	7.213	1.000	20.92
ATOM	2094	CG	ASP	B	41	101.812	15.531	6.671	1.000	29.64
ATOM	2095	OD1	ASP	B	41	101.105	14.524	6.429	1.000	27.42
ATOM	2096	OD2	ASP	B	41	101.405	16.703	6.478	1.000	26.42
ATOM	2097	C	ASP	B	41	103.396	12.858	7.850	1.000	29.93
ATOM	2098	O	ASP	B	41	104.359	12.163	8.188	1.000	26.42
ATOM	2099	N	LEU	B	42	102.437	12.392	7.051	1.000	28.41
ATOM	2100	CA	LEU	B	42	102.481	11.005	6.581	1.000	27.15
ATOM	2101	CB	LEU	B	42	101.108	10.576	6.063	1.000	27.77
ATOM	2102	CG	LEU	B	42	99.985	10.577	7.115	1.000	29.61
ATOM	2103	CD1	LEU	B	42	98.614	10.414	6.481	1.000	27.21
ATOM	2104	CD2	LEU	B	42	100.221	9.488	8.154	1.000	19.92
ATOM	2105	C	LEU	B	42	103.574	10.841	5.531	1.000	25.47
ATOM	2106	O	LEU	B	42	103.937	11.779	4.822	1.000	22.04
ATOM	2107	N	PRO	B	43	104.122	9.639	5.436	1.000	29.99
ATOM	2108	CD	PRO	B	43	103.694	8.435	6.176	1.000	32.56
ATOM	2109	CA	PRO	B	43	105.242	9.382	4.537	1.000	31.41
ATOM	2110	CB	PRO	B	43	105.524	7.885	4.706	1.000	29.49
ATOM	2111	CG	PRO	B	43	104.804	7.459	5.934	1.000	32.19
ATOM	2112	C	PRO	B	43	104.892	9.640	3.079	1.000	32.37
ATOM	2113	O	PRO	B	43	105.741	10.056	2.290	1.000	40.08
ATOM	2114	N	ASN	B	44	103.649	9.379	2.688	1.000	32.25
ATOM	2115	CA	ASN	B	44	103.351	9.437	1.251	1.000	42.24
ATOM	2116	CB	ASN	B	44	102.182	8.494	0.942	1.000	51.15
ATOM	2117	CG	ASN	B	44	101.098	8.594	2.004	1.000	57.16
ATOM	2118	OD1	ASN	B	44	101.059	7.778	2.927	1.000	69.55
ATOM	2119	ND2	ASN	B	44	100.233	9.594	1.871	1.000	64.33
ATOM	2120	C	ASN	B	44	103.050	10.848	0.782	1.000	38.90
ATOM	2121	O	ASN	B	44	102.817	11.126	-0.391	1.000	43.08
ATOM	2122	N	SER	B	45	103.044	11.795	1.706	1.000	38.17
ATOM	2123	CA	SER	B	45	102.784	13.191	1.397	1.000	32.01
ATOM	2124	CB	SER	B	45	102.407	13.904	2.699	1.000	32.03
ATOM	2125	OG	SER	B	45	103.500	13.896	3.615	1.000	31.99
ATOM	2126	C	SER	B	45	104.006	13.834	0.765	1.000	37.39
ATOM	2127	O	SER	B	45	105.029	13.173	0.571	1.000	64.10
ATOM	2128	N	GLY	B	46	103.940	15.127	0.453	1.000	31.91
ATOM	2129	CA	GLY	B	46	105.100	15.848	-0.037	1.000	32.05
ATOM	2130	C	GLY	B	46	105.862	16.554	1.068	1.000	29.66

ATOM	2131	O	GLY	B	46	106.422	17.629	0.865	1.000	28.80
ATOM	2132	N	GLY	B	47	105.917	15.984	2.274	1.000	27.32
ATOM	2133	CA	GLY	B	47	106.644	16.681	3.330	1.000	30.59
ATOM	2134	C	GLY	B	47	108.119	16.856	3.032	1.000	33.46
ATOM	2135	O	GLY	B	47	108.684	17.915	3.326	1.000	29.47
ATOM	2136	N	GLU	B	48	108.764	15.832	2.466	1.000	29.78
ATOM	2137	CA	GLU	B	48	110.212	15.914	2.232	1.000	32.49
ATOM	2138	CB	GLU	B	48	110.744	14.610	1.647	1.000	36.34
ATOM	2139	CG	GLU	B	48	112.256	14.551	1.507	1.000	46.76
ATOM	2140	CD	GLU	B	48	112.991	14.939	2.774	1.000	58.39
ATOM	2141	OE1	GLU	B	48	113.372	16.117	2.956	1.000	65.04
ATOM	2142	OE2	GLU	B	48	113.207	14.028	3.606	1.000	69.75
ATOM	2143	C	GLU	B	48	110.524	17.101	1.331	1.000	29.02
ATOM	2144	O	GLU	B	48	111.404	17.915	1.607	1.000	34.13
ATOM	2145	N	ALA	B	49	109.785	17.216	0.234	1.000	26.82
ATOM	2146	CA	ALA	B	49	110.004	18.341	-0.673	1.000	30.63
ATOM	2147	CB	ALA	B	49	109.092	18.199	-1.886	1.000	29.53
ATOM	2148	C	ALA	B	49	109.794	19.675	0.022	1.000	29.76
ATOM	2149	O	ALA	B	49	110.547	20.635	-0.182	1.000	23.29
ATOM	2150	N	GLN	B	50	108.761	19.788	0.867	1.000	27.24
ATOM	2151	CA	GLN	B	50	108.548	21.102	1.495	1.000	25.56
ATOM	2152	CB	GLN	B	50	107.198	21.202	2.190	1.000	23.47
ATOM	2153	CG	GLN	B	50	105.977	20.906	1.343	1.000	24.08
ATOM	2154	CD	GLN	B	50	105.804	21.782	0.126	1.000	29.27
ATOM	2155	OE1	GLN	B	50	105.277	21.374	-0.913	1.000	47.91
ATOM	2156	NE2	GLN	B	50	106.246	23.030	0.225	1.000	26.60
ATOM	2157	C	GLN	B	50	109.685	21.407	2.470	1.000	24.41
ATOM	2158	O	GLN	B	50	110.136	22.545	2.584	1.000	24.06
ATOM	2159	N	ALA	B	51	110.164	20.382	3.167	1.000	26.27
ATOM	2160	CA	ALA	B	51	111.284	20.572	4.092	1.000	28.44
ATOM	2161	CB	ALA	B	51	111.492	19.317	4.921	1.000	27.41
ATOM	2162	C	ALA	B	51	112.549	20.947	3.328	1.000	31.71
ATOM	2163	O	ALA	B	51	113.313	21.838	3.699	1.000	26.46
ATOM	2164	N	LYS	B	52	112.792	20.260	2.206	1.000	31.97
ATOM	2165	CA	LYS	B	52	113.941	20.629	1.370	1.000	32.72
ATOM	2166	CB	LYS	B	52	114.046	19.675	0.190	1.000	37.57
ATOM	2167	CG	LYS	B	52	114.741	20.219	-1.041	1.000	48.41
ATOM	2168	CD	LYS	B	52	113.843	20.066	-2.266	1.000	61.11
ATOM	2169	CE	LYS	B	52	112.614	20.953	-2.133	1.000	65.36
ATOM	2170	NZ	LYS	B	52	111.536	20.598	-3.095	1.000	32.81
ATOM	2171	C	LYS	B	52	113.812	22.074	0.919	1.000	31.76
ATOM	2172	O	LYS	B	52	114.749	22.872	1.011	1.000	30.51
ATOM	2173	N	LYS	B	53	112.625	22.447	0.436	1.000	30.99
ATOM	2174	CA	LYS	B	53	112.430	23.823	-0.007	1.000	34.36
ATOM	2175	CB	LYS	B	53	111.017	24.015	-0.558	1.000	35.38
ATOM	2176	C	LYS	B	53	112.670	24.835	1.104	1.000	35.83
ATOM	2177	O	LYS	B	53	113.099	25.966	0.863	1.000	37.38
ATOM	2178	N	LEU	B	54	112.376	24.467	2.355	1.000	34.60
ATOM	2179	CA	LEU	B	54	112.414	25.524	3.378	1.000	32.04
ATOM	2180	CB	LEU	B	54	111.386	25.206	4.469	1.000	27.56
ATOM	2181	CG	LEU	B	54	109.951	25.622	4.092	1.000	29.64
ATOM	2182	CD1	LEU	B	54	108.940	25.049	5.072	1.000	26.83
ATOM	2183	CD2	LEU	B	54	109.854	27.139	4.005	1.000	28.08
ATOM	2184	C	LEU	B	54	113.803	25.751	3.946	1.000	30.99
ATOM	2185	O	LEU	B	54	114.035	26.722	4.670	1.000	36.53
ATOM	2186	N	GLY	B	55	114.760	24.889	3.613	1.000	35.24
ATOM	2187	CA	GLY	B	55	116.145	25.129	3.970	1.000	28.30
ATOM	2188	C	GLY	B	55	116.658	24.251	5.088	1.000	28.98
ATOM	2189	O	GLY	B	55	115.983	23.344	5.577	1.000	26.51
ATOM	2190	N	ASN	B	56	117.886	24.525	5.500	1.000	31.16
ATOM	2191	CA	ASN	B	56	118.579	23.765	6.527	1.000	37.68

ATOM	2192	CB	ASN	B	56	120.017	24.285	6.673	1.000	45.44
ATOM	2193	CG	ASN	B	56	120.802	24.041	5.394	1.000	53.62
ATOM	2194	OD1	ASN	B	56	121.666	24.836	5.028	1.000	63.23
ATOM	2195	ND2	ASN	B	56	120.488	22.943	4.713	1.000	51.47
ATOM	2196	C	ASN	B	56	117.884	23.822	7.876	1.000	35.34
ATOM	2197	O	ASN	B	56	118.077	22.918	8.695	1.000	36.61
ATOM	2198	N	ASN	B	57	117.080	24.852	8.124	1.000	35.84
ATOM	2199	CA	ASN	B	57	116.390	24.941	9.415	1.000	33.51
ATOM	2200	CB	ASN	B	57	116.150	26.402	9.776	1.000	34.67
ATOM	2201	CG	ASN	B	57	117.396	27.188	10.107	1.000	37.48
ATOM	2202	OD1	ASN	B	57	117.464	28.386	9.831	1.000	44.60
ATOM	2203	ND2	ASN	B	57	118.378	26.525	10.702	1.000	40.04
ATOM	2204	C	ASN	B	57	115.062	24.188	9.411	1.000	34.71
ATOM	2205	O	ASN	B	57	114.259	24.325	10.339	1.000	30.75
ATOM	2206	N	CYS	B	58	114.815	23.385	8.381	1.000	29.69
ATOM	2207	CA	CYS	B	58	113.570	22.626	8.314	1.000	31.12
ATOM	2208	CB	CYS	B	58	112.554	23.328	7.403	1.000	28.69
ATOM	2209	SG	CYS	B	58	110.969	22.451	7.263	1.000	28.53
ATOM	2210	C	CYS	B	58	113.803	21.196	7.842	1.000	29.28
ATOM	2211	O	CYS	B	58	114.439	20.961	6.813	1.000	32.21
ATOM	2212	N	VAL	B	59	113.295	20.221	8.587	1.000	26.05
ATOM	2213	CA	VAL	B	59	113.388	18.827	8.185	1.000	27.33
ATOM	2214	CB	VAL	B	59	114.370	18.032	9.068	1.000	35.06
ATOM	2215	CG1	VAL	B	59	115.723	18.727	9.136	1.000	33.58
ATOM	2216	CG2	VAL	B	59	113.819	17.829	10.473	1.000	34.14
ATOM	2217	C	VAL	B	59	112.021	18.148	8.226	1.000	27.96
ATOM	2218	O	VAL	B	59	111.077	18.615	8.868	1.000	29.69
ATOM	2219	N	PHE	B	60	111.910	17.034	7.523	1.000	26.97
ATOM	2220	CA	PHE	B	60	110.708	16.227	7.457	1.000	26.91
ATOM	2221	CB	PHE	B	60	110.427	15.790	6.020	1.000	25.25
ATOM	2222	CG	PHE	B	60	109.323	14.749	5.896	1.000	29.29
ATOM	2223	CD1	PHE	B	60	108.032	15.040	6.313	1.000	29.86
ATOM	2224	CD2	PHE	B	60	109.578	13.496	5.370	1.000	28.92
ATOM	2225	CE1	PHE	B	60	107.038	14.090	6.198	1.000	27.49
ATOM	2226	CE2	PHE	B	60	108.586	12.541	5.248	1.000	26.44
ATOM	2227	CZ	PHE	B	60	107.300	12.839	5.667	1.000	25.34
ATOM	2228	C	PHE	B	60	110.830	14.998	8.353	1.000	30.94
ATOM	2229	O	PHE	B	60	111.820	14.270	8.314	1.000	25.53
ATOM	2230	N	ALA	B	61	109.800	14.783	9.167	1.000	28.55
ATOM	2231	CA	ALA	B	61	109.720	13.601	10.013	1.000	25.87
ATOM	2232	CB	ALA	B	61	109.776	13.997	11.480	1.000	26.71
ATOM	2233	C	ALA	B	61	108.444	12.838	9.687	1.000	27.90
ATOM	2234	O	ALA	B	61	107.358	13.292	10.060	1.000	32.37
ATOM	2235	N	PRO	B	62	108.554	11.718	8.984	1.000	30.44
ATOM	2236	CD	PRO	B	62	109.781	11.150	8.400	1.000	27.89
ATOM	2237	CA	PRO	B	62	107.376	10.900	8.679	1.000	29.03
ATOM	2238	CB	PRO	B	62	107.922	9.757	7.816	1.000	28.20
ATOM	2239	CG	PRO	B	62	109.385	9.732	8.097	1.000	28.71
ATOM	2240	C	PRO	B	62	106.750	10.325	9.944	1.000	29.30
ATOM	2241	O	PRO	B	62	107.417	9.731	10.789	1.000	30.53
ATOM	2242	N	ALA	B	63	105.439	10.485	10.095	1.000	27.18
ATOM	2243	CA	ALA	B	63	104.766	9.913	11.259	1.000	27.63
ATOM	2244	CB	ALA	B	63	105.180	10.646	12.524	1.000	23.24
ATOM	2245	C	ALA	B	63	103.249	9.974	11.099	1.000	23.37
ATOM	2246	O	ALA	B	63	102.722	10.929	10.526	1.000	27.56
ATOM	2247	N	ASP	B	64	102.583	8.953	11.609	1.000	24.35
ATOM	2248	CA	ASP	B	64	101.133	8.963	11.799	1.000	26.55
ATOM	2249	CB	ASP	B	64	100.551	7.597	11.478	1.000	24.92
ATOM	2250	CG	ASP	B	64	99.045	7.527	11.597	1.000	25.45
ATOM	2251	OD1	ASP	B	64	98.476	6.566	11.044	1.000	32.77
ATOM	2252	OD2	ASP	B	64	98.418	8.396	12.227	1.000	28.70

ATOM	2253	C	ASP	B	64	100.836	9.364	13.243	1.000	26.22
ATOM	2254	O	ASP	B	64	101.328	8.686	14.153	1.000	22.25
ATOM	2255	N	VAL	B	65	100.072	10.435	13.456	1.000	29.99
ATOM	2256	CA	VAL	B	65	99.881	10.939	14.821	1.000	24.56
ATOM	2257	CB	VAL	B	65	99.246	12.340	14.882	1.000	24.64
ATOM	2258	CG1	VAL	B	65	100.144	13.380	14.212	1.000	20.71
ATOM	2259	CG2	VAL	B	65	97.855	12.336	14.260	1.000	19.79
ATOM	2260	C	VAL	B	65	99.029	9.988	15.655	1.000	21.85
ATOM	2261	O	VAL	B	65	98.984	10.127	16.883	1.000	27.56
ATOM	2262	N	THR	B	66	98.358	9.029	15.024	1.000	18.06
ATOM	2263	CA	THR	B	66	97.587	8.071	15.806	1.000	23.90
ATOM	2264	CB	THR	B	66	96.458	7.415	14.988	1.000	27.89
ATOM	2265	OG1	THR	B	66	97.053	6.676	13.911	1.000	30.40
ATOM	2266	CG2	THR	B	66	95.531	8.457	14.387	1.000	26.02
ATOM	2267	C	THR	B	66	98.477	6.956	16.354	1.000	25.80
ATOM	2268	O	THR	B	66	97.994	6.069	17.052	1.000	28.04
ATOM	2269	N	SER	B	67	99.765	6.987	16.043	1.000	26.27
ATOM	2270	CA	SER	B	67	100.658	5.901	16.457	1.000	28.10
ATOM	2271	CB	SER	B	67	101.309	5.256	15.229	1.000	22.33
ATOM	2272	OG	SER	B	67	102.655	4.885	15.432	1.000	26.97
ATOM	2273	C	SER	B	67	101.718	6.397	17.438	1.000	25.97
ATOM	2274	O	SER	B	67	102.509	7.288	17.137	1.000	28.64
ATOM	2275	N	GLU	B	68	101.742	5.812	18.628	1.000	25.20
ATOM	2276	CA	GLU	B	68	102.668	6.240	19.678	1.000	28.93
ATOM	2277	CB	GLU	B	68	102.418	5.401	20.920	1.000	29.49
ATOM	2278	CG	GLU	B	68	103.467	5.385	22.009	1.000	32.30
ATOM	2279	CD	GLU	B	68	102.977	4.561	23.196	1.000	38.17
ATOM	2280	OE1	GLU	B	68	102.637	5.171	24.237	1.000	35.47
ATOM	2281	OE2	GLU	B	68	102.917	3.315	23.091	1.000	44.60
ATOM	2282	C	GLU	B	68	104.110	6.125	19.201	1.000	26.61
ATOM	2283	O	GLU	B	68	104.899	7.061	19.313	1.000	23.88
ATOM	2284	N	LYS	B	69	104.437	4.958	18.662	1.000	24.43
ATOM	2285	CA	LYS	B	69	105.780	4.698	18.156	1.000	27.96
ATOM	2286	CB	LYS	B	69	105.851	3.281	17.595	1.000	34.89
ATOM	2287	C	LYS	B	69	106.202	5.708	17.100	1.000	27.55
ATOM	2288	O	LYS	B	69	107.302	6.264	17.148	1.000	26.09
ATOM	2289	N	ASP	B	70	105.324	5.973	16.128	1.000	26.32
ATOM	2290	CA	ASP	B	70	105.666	6.951	15.094	1.000	25.61
ATOM	2291	CB	ASP	B	70	104.521	7.076	14.090	1.000	29.36
ATOM	2292	CG	ASP	B	70	104.475	5.972	13.052	1.000	32.02
ATOM	2293	OD1	ASP	B	70	105.238	4.989	13.156	1.000	28.74
ATOM	2294	OD2	ASP	B	70	103.655	6.078	12.105	1.000	31.35
ATOM	2295	C	ASP	B	70	105.969	8.310	15.703	1.000	25.58
ATOM	2296	O	ASP	B	70	106.940	8.988	15.360	1.000	25.97
ATOM	2297	N	VAL	B	71	105.114	8.758	16.635	1.000	27.46
ATOM	2298	CA	VAL	B	71	105.340	10.110	17.172	1.000	23.79
ATOM	2299	CB	VAL	B	71	104.121	10.602	17.966	1.000	23.68
ATOM	2300	CG1	VAL	B	71	104.423	11.915	18.668	1.000	22.16
ATOM	2301	CG2	VAL	B	71	102.929	10.759	17.030	1.000	27.40
ATOM	2302	C	VAL	B	71	106.598	10.124	18.025	1.000	23.50
ATOM	2303	O	VAL	B	71	107.373	11.079	18.014	1.000	25.44
ATOM	2304	N	GLN	B	72	106.808	9.037	18.777	1.000	22.76
ATOM	2305	CA	GLN	B	72	108.078	8.961	19.507	1.000	28.52
ATOM	2306	CB	GLN	B	72	108.135	7.661	20.313	1.000	28.51
ATOM	2307	CG	GLN	B	72	107.370	7.770	21.621	1.000	29.69
ATOM	2308	CD	GLN	B	72	107.251	6.451	22.355	1.000	35.53
ATOM	2309	OE1	GLN	B	72	106.976	5.411	21.762	1.000	42.43
ATOM	2310	NE2	GLN	B	72	107.450	6.507	23.669	1.000	42.60
ATOM	2311	C	GLN	B	72	109.238	9.055	18.532	1.000	27.07
ATOM	2312	O	GLN	B	72	110.206	9.781	18.738	1.000	30.00
ATOM	2313	N	THR	B	73	109.126	8.301	17.432	1.000	23.90

ATOM	2314	CA	THR	B	73	110.180	8.335	16.419	1.000	30.39
ATOM	2315	CB	THR	B	73	109.809	7.402	15.245	1.000	37.28
ATOM	2316	OG1	THR	B	73	109.774	6.051	15.729	1.000	35.29
ATOM	2317	CG2	THR	B	73	110.846	7.464	14.138	1.000	35.54
ATOM	2318	C	THR	B	73	110.426	9.744	15.905	1.000	31.92
ATOM	2319	O	THR	B	73	111.559	10.226	15.830	1.000	33.51
ATOM	2320	N	ALA	B	74	109.341	10.436	15.545	1.000	27.80
ATOM	2321	CA	ALA	B	74	109.484	11.799	15.050	1.000	22.69
ATOM	2322	CB	ALA	B	74	108.134	12.322	14.574	1.000	23.30
ATOM	2323	C	ALA	B	74	110.074	12.723	16.102	1.000	26.52
ATOM	2324	O	ALA	B	74	110.869	13.610	15.783	1.000	29.72
ATOM	2325	N	LEU	B	75	109.701	12.558	17.374	1.000	25.95
ATOM	2326	CA	LEU	B	75	110.234	13.504	18.364	1.000	25.51
ATOM	2327	CB	LEU	B	75	109.399	13.416	19.648	1.000	26.48
ATOM	2328	CG	LEU	B	75	107.994	14.018	19.562	1.000	24.78
ATOM	2329	CD1	LEU	B	75	107.305	13.969	20.919	1.000	28.37
ATOM	2330	CD2	LEU	B	75	108.043	15.449	19.050	1.000	24.31
ATOM	2331	C	LEU	B	75	111.705	13.245	18.648	1.000	22.87
ATOM	2332	O	LEU	B	75	112.509	14.147	18.887	1.000	22.28
ATOM	2333	N	ALA	B	76	112.089	11.972	18.627	1.000	27.27
ATOM	2334	CA	ALA	B	76	113.506	11.626	18.780	1.000	33.68
ATOM	2335	CB	ALA	B	76	113.673	10.117	18.844	1.000	30.02
ATOM	2336	C	ALA	B	76	114.318	12.238	17.643	1.000	34.38
ATOM	2337	O	ALA	B	76	115.423	12.735	17.830	1.000	32.44
ATOM	2338	N	LEU	B	77	113.746	12.211	16.439	1.000	35.72
ATOM	2339	CA	LEU	B	77	114.406	12.813	15.279	1.000	29.98
ATOM	2340	CB	LEU	B	77	113.597	12.512	14.022	1.000	32.18
ATOM	2341	CG	LEU	B	77	114.232	12.800	12.666	1.000	35.08
ATOM	2342	CD1	LEU	B	77	113.659	11.860	11.611	1.000	41.62
ATOM	2343	CD2	LEU	B	77	114.033	14.245	12.241	1.000	32.26
ATOM	2344	C	LEU	B	77	114.574	14.310	15.481	1.000	31.25
ATOM	2345	O	LEU	B	77	115.606	14.894	15.149	1.000	31.59
ATOM	2346	N	ALA	B	78	113.541	14.968	16.013	1.000	29.31
ATOM	2347	CA	ALA	B	78	113.645	16.414	16.212	1.000	29.75
ATOM	2348	CB	ALA	B	78	112.313	17.019	16.619	1.000	30.45
ATOM	2349	C	ALA	B	78	114.710	16.745	17.249	1.000	28.71
ATOM	2350	O	ALA	B	78	115.502	17.670	17.063	1.000	27.61
ATOM	2351	N	LYS	B	79	114.745	16.003	18.357	1.000	33.16
ATOM	2352	CA	LYS	B	79	115.778	16.335	19.354	1.000	38.43
ATOM	2353	CB	LYS	B	79	115.625	15.513	20.619	1.000	31.00
ATOM	2354	C	LYS	B	79	117.164	16.157	18.731	1.000	38.50
ATOM	2355	O	LYS	B	79	118.019	17.042	18.730	1.000	37.36
ATOM	2356	N	GLY	B	80	117.376	14.975	18.163	1.000	38.28
ATOM	2357	CA	GLY	B	80	118.617	14.652	17.482	1.000	40.37
ATOM	2358	C	GLY	B	80	118.986	15.682	16.440	1.000	41.82
ATOM	2359	O	GLY	B	80	120.160	15.985	16.233	1.000	43.44
ATOM	2360	N	LYS	B	81	117.993	16.265	15.757	1.000	38.61
ATOM	2361	CA	LYS	B	81	118.386	17.243	14.741	1.000	34.19
ATOM	2362	CB	LYS	B	81	117.372	17.249	13.592	1.000	39.19
ATOM	2363	CG	LYS	B	81	117.538	18.427	12.637	1.000	47.35
ATOM	2364	CD	LYS	B	81	118.642	18.163	11.626	1.000	53.28
ATOM	2365	CE	LYS	B	81	119.342	19.448	11.209	1.000	57.14
ATOM	2366	NZ	LYS	B	81	120.217	19.236	10.022	1.000	61.45
ATOM	2367	C	LYS	B	81	118.543	18.637	15.322	1.000	35.44
ATOM	2368	O	LYS	B	81	119.491	19.336	14.958	1.000	32.57
ATOM	2369	N	PHE	B	82	117.643	19.075	16.201	1.000	33.67
ATOM	2370	CA	PHE	B	82	117.687	20.471	16.628	1.000	30.79
ATOM	2371	CB	PHE	B	82	116.404	21.198	16.219	1.000	33.81
ATOM	2372	CG	PHE	B	82	116.254	21.364	14.714	1.000	34.04
ATOM	2373	CD1	PHE	B	82	117.213	22.049	13.985	1.000	32.49
ATOM	2374	CD2	PHE	B	82	115.157	20.833	14.049	1.000	31.02

ATOM	2375	CE1	PHE	B	82	117.093	22.203	12.616	1.000	33.17
ATOM	2376	CE2	PHE	B	82	115.030	20.985	12.682	1.000	29.68
ATOM	2377	CZ	PHE	B	82	115.996	21.669	11.963	1.000	33.22
ATOM	2378	C	PHE	B	82	117.902	20.639	18.128	1.000	34.16
ATOM	2379	O	PHE	B	82	117.977	21.775	18.604	1.000	34.38
ATOM	2380	N	GLY	B	83	118.015	19.535	18.859	1.000	36.21
ATOM	2381	CA	GLY	B	83	118.420	19.550	20.240	1.000	37.95
ATOM	2382	C	GLY	B	83	117.354	19.747	21.287	1.000	40.28
ATOM	2383	O	GLY	B	83	117.569	19.334	22.435	1.000	38.88
ATOM	2384	N	ARG	B	84	116.230	20.361	20.947	1.000	37.13
ATOM	2385	CA	ARG	B	84	115.132	20.596	21.879	1.000	33.93
ATOM	2386	CB	ARG	B	84	115.438	21.715	22.874	1.000	26.55
ATOM	2387	CG	ARG	B	84	115.871	23.032	22.277	1.000	34.91
ATOM	2388	CD	ARG	B	84	115.369	24.232	23.062	1.000	45.07
ATOM	2389	NE	ARG	B	84	115.930	24.340	24.401	1.000	52.33
ATOM	2390	CZ	ARG	B	84	115.403	24.960	25.444	1.000	56.40
ATOM	2391	NH1	ARG	B	84	116.049	24.962	26.607	1.000	64.88
ATOM	2392	NH2	ARG	B	84	114.238	25.591	25.372	1.000	32.24
ATOM	2393	C	ARG	B	84	113.863	20.943	21.102	1.000	35.43
ATOM	2394	O	ARG	B	84	113.976	21.169	19.893	1.000	38.55
ATOM	2395	N	VAL	B	85	112.727	20.977	21.792	1.000	25.77
ATOM	2396	CA	VAL	B	85	111.474	21.435	21.208	1.000	23.25
ATOM	2397	CB	VAL	B	85	110.453	20.303	21.008	1.000	28.26
ATOM	2398	CG1	VAL	B	85	109.205	20.870	20.335	1.000	27.90
ATOM	2399	CG2	VAL	B	85	111.018	19.159	20.183	1.000	25.21
ATOM	2400	C	VAL	B	85	110.836	22.521	22.072	1.000	25.60
ATOM	2401	O	VAL	B	85	110.606	22.326	23.263	1.000	29.58
ATOM	2402	N	ASP	B	86	110.541	23.669	21.481	1.000	25.06
ATOM	2403	CA	ASP	B	86	109.985	24.804	22.195	1.000	24.15
ATOM	2404	CB	ASP	B	86	110.675	26.098	21.753	1.000	27.61
ATOM	2405	CG	ASP	B	86	112.183	25.984	21.887	1.000	32.39
ATOM	2406	OD1	ASP	B	86	112.882	25.895	20.862	1.000	33.23
ATOM	2407	OD2	ASP	B	86	112.610	25.970	23.055	1.000	34.44
ATOM	2408	C	ASP	B	86	108.490	24.977	21.949	1.000	30.30
ATOM	2409	O	ASP	B	86	107.788	25.521	22.798	1.000	21.74
ATOM	2410	N	VAL	B	87	108.059	24.524	20.778	1.000	23.56
ATOM	2411	CA	VAL	B	87	106.718	24.750	20.265	1.000	19.89
ATOM	2412	CB	VAL	B	87	106.701	25.920	19.260	1.000	25.46
ATOM	2413	CG1	VAL	B	87	105.346	26.049	18.580	1.000	23.92
ATOM	2414	CG2	VAL	B	87	107.072	27.232	19.942	1.000	23.79
ATOM	2415	C	VAL	B	87	106.197	23.506	19.563	1.000	24.56
ATOM	2416	O	VAL	B	87	106.923	22.816	18.841	1.000	26.61
ATOM	2417	N	ALA	B	88	104.922	23.211	19.784	1.000	22.40
ATOM	2418	CA	ALA	B	88	104.242	22.158	19.039	1.000	20.37
ATOM	2419	CB	ALA	B	88	103.979	20.911	19.848	1.000	19.16
ATOM	2420	C	ALA	B	88	102.940	22.763	18.508	1.000	25.15
ATOM	2421	O	ALA	B	88	102.254	23.506	19.204	1.000	23.17
ATOM	2422	N	VAL	B	89	102.641	22.455	17.254	1.000	23.24
ATOM	2423	CA	VAL	B	89	101.405	22.908	16.621	1.000	20.62
ATOM	2424	CB	VAL	B	89	101.617	24.043	15.611	1.000	26.07
ATOM	2425	CG1	VAL	B	89	100.278	24.578	15.114	1.000	24.86
ATOM	2426	CG2	VAL	B	89	102.426	25.180	16.224	1.000	20.28
ATOM	2427	C	VAL	B	89	100.760	21.700	15.948	1.000	20.49
ATOM	2428	O	VAL	B	89	101.390	21.106	15.061	1.000	22.27
ATOM	2429	N	ASN	B	90	99.564	21.369	16.399	1.000	17.06
ATOM	2430	CA	ASN	B	90	98.767	20.263	15.895	1.000	21.63
ATOM	2431	CB	ASN	B	90	97.912	19.676	17.029	1.000	21.17
ATOM	2432	CG	ASN	B	90	98.770	18.964	18.062	1.000	25.12
ATOM	2433	OD1	ASN	B	90	99.010	19.453	19.168	1.000	26.62
ATOM	2434	ND2	ASN	B	90	99.248	17.781	17.700	1.000	19.87
ATOM	2435	C	ASN	B	90	97.873	20.706	14.739	1.000	27.25

ATOM	2436	O	ASN	B	90	96.831	21.346	14.926	1.000	24.49
ATOM	2437	N	CYS	B	91	98.272	20.379	13.508	1.000	22.65
ATOM	2438	CA	CYS	B	91	97.454	20.744	12.352	1.000	22.91
ATOM	2439	CB	CYS	B	91	98.256	21.622	11.393	1.000	21.50
ATOM	2440	SG	CYS	B	91	98.481	23.331	11.928	1.000	24.36
ATOM	2441	C	CYS	B	91	96.938	19.496	11.645	1.000	27.06
ATOM	2442	O	CYS	B	91	95.978	19.559	10.883	1.000	25.06
ATOM	2443	N	ALA	B	92	97.568	18.349	11.892	1.000	24.70
ATOM	2444	CA	ALA	B	92	97.110	17.080	11.342	1.000	26.12
ATOM	2445	CB	ALA	B	92	97.914	15.933	11.959	1.000	19.70
ATOM	2446	C	ALA	B	92	95.621	16.872	11.572	1.000	29.63
ATOM	2447	O	ALA	B	92	95.119	16.947	12.698	1.000	21.23
ATOM	2448	N	GLY	B	93	94.889	16.609	10.487	1.000	27.75
ATOM	2449	CA	GLY	B	93	93.457	16.386	10.607	1.000	22.27
ATOM	2450	C	GLY	B	93	92.818	15.838	9.346	1.000	25.37
ATOM	2451	O	GLY	B	93	93.385	15.929	8.258	1.000	21.56
ATOM	2452	N	ILE	B	94	91.632	15.264	9.485	1.000	22.61
ATOM	2453	CA	ILE	B	94	90.850	14.804	8.346	1.000	24.90
ATOM	2454	CB	ILE	B	94	90.800	13.273	8.204	1.000	25.11
ATOM	2455	CG2	ILE	B	94	92.115	12.706	7.714	1.000	22.97
ATOM	2456	CG1	ILE	B	94	90.338	12.560	9.483	1.000	27.64
ATOM	2457	CD1	ILE	B	94	89.890	11.131	9.224	1.000	26.94
ATOM	2458	C	ILE	B	94	89.407	15.295	8.479	1.000	25.32
ATOM	2459	O	ILE	B	94	88.996	15.736	9.550	1.000	24.04
ATOM	2460	N	ALA	B	95	88.659	15.202	7.393	1.000	31.39
ATOM	2461	CA	ALA	B	95	87.265	15.611	7.343	1.000	32.56
ATOM	2462	CB	ALA	B	95	87.069	16.880	6.525	1.000	25.46
ATOM	2463	C	ALA	B	95	86.409	14.505	6.746	1.000	32.05
ATOM	2464	O	ALA	B	95	86.857	13.724	5.912	1.000	26.39
ATOM	2465	N	VAL	B	96	85.160	14.442	7.191	1.000	27.70
ATOM	2466	CA	VAL	B	96	84.185	13.607	6.506	1.000	27.20
ATOM	2467	CB	VAL	B	96	83.957	12.218	7.104	1.000	32.47
ATOM	2468	CG1	VAL	B	96	85.263	11.457	7.265	1.000	52.62
ATOM	2469	CG2	VAL	B	96	83.244	12.333	8.443	1.000	43.39
ATOM	2470	C	VAL	B	96	82.857	14.374	6.512	1.000	26.65
ATOM	2471	O	VAL	B	96	82.617	15.204	7.398	1.000	25.44
ATOM	2472	N	ALA	B	97	82.047	14.075	5.506	1.000	26.05
ATOM	2473	CA	ALA	B	97	80.690	14.629	5.475	1.000	22.29
ATOM	2474	CB	ALA	B	97	80.509	15.590	4.323	1.000	29.01
ATOM	2475	C	ALA	B	97	79.737	13.442	5.426	1.000	25.57
ATOM	2476	O	ALA	B	97	79.745	12.662	4.479	1.000	29.16
ATOM	2477	N	SER	B	98	78.940	13.271	6.469	1.000	21.75
ATOM	2478	CA	SER	B	98	78.024	12.132	6.535	1.000	25.42
ATOM	2479	CB	SER	B	98	78.792	10.846	6.799	1.000	26.09
ATOM	2480	OG	SER	B	98	77.975	9.704	6.960	1.000	23.21
ATOM	2481	C	SER	B	98	76.998	12.432	7.626	1.000	28.54
ATOM	2482	O	SER	B	98	77.383	12.679	8.775	1.000	22.53
ATOM	2483	N	LYS	B	99	75.731	12.420	7.235	1.000	22.98
ATOM	2484	CA	LYS	B	99	74.636	12.671	8.162	1.000	26.62
ATOM	2485	CB	LYS	B	99	73.326	12.836	7.385	1.000	26.24
ATOM	2486	CG	LYS	B	99	73.276	14.063	6.492	1.000	25.94
ATOM	2487	CD	LYS	B	99	72.099	13.945	5.534	1.000	32.26
ATOM	2488	CE	LYS	B	99	71.982	15.187	4.659	1.000	37.24
ATOM	2489	NZ	LYS	B	99	70.599	15.299	4.106	1.000	50.59
ATOM	2490	C	LYS	B	99	74.461	11.545	9.181	1.000	27.88
ATOM	2491	O	LYS	B	99	74.711	10.370	8.884	1.000	21.35
ATOM	2492	N	THR	B	100	74.007	11.918	10.382	1.000	21.91
ATOM	2493	CA	THR	B	100	73.801	10.934	11.444	1.000	18.81
ATOM	2494	CB	THR	B	100	73.223	11.601	12.709	1.000	21.49
ATOM	2495	OG1	THR	B	100	74.235	12.450	13.267	1.000	21.98
ATOM	2496	CG2	THR	B	100	72.862	10.565	13.755	1.000	18.29

ATOM	2497	C	THR	B	100	72.873	9.821	10.988	1.000	23.10
ATOM	2498	O	THR	B	100	73.143	8.635	11.153	1.000	23.86
ATOM	2499	N	TYR	B	101	71.758	10.242	10.399	1.000	25.05
ATOM	2500	CA	TYR	B	101	70.827	9.312	9.782	1.000	25.55
ATOM	2501	CB	TYR	B	101	69.788	8.824	10.801	1.000	24.38
ATOM	2502	CG	TYR	B	101	68.798	7.861	10.170	1.000	27.81
ATOM	2503	CD1	TYR	B	101	67.465	8.207	10.024	1.000	27.63
ATOM	2504	CE1	TYR	B	101	66.570	7.330	9.448	1.000	29.00
ATOM	2505	CD2	TYR	B	101	69.211	6.614	9.719	1.000	28.85
ATOM	2506	CE2	TYR	B	101	68.323	5.730	9.141	1.000	29.92
ATOM	2507	CZ	TYR	B	101	67.002	6.099	9.010	1.000	32.68
ATOM	2508	OH	TYR	B	101	66.106	5.224	8.434	1.000	33.84
ATOM	2509	C	TYR	B	101	70.138	9.977	8.592	1.000	30.29
ATOM	2510	O	TYR	B	101	69.842	11.171	8.653	1.000	27.66
ATOM	2511	N	ASN	B	102	69.890	9.219	7.533	1.000	32.30
ATOM	2512	CA	ASN	B	102	69.095	9.704	6.406	1.000	27.57
ATOM	2513	CB	ASN	B	102	69.937	9.723	5.130	1.000	33.98
ATOM	2514	CG	ASN	B	102	69.240	10.469	4.002	1.000	36.11
ATOM	2515	OD1	ASN	B	102	68.038	10.287	3.797	1.000	36.21
ATOM	2516	ND2	ASN	B	102	69.974	11.311	3.283	1.000	25.79
ATOM	2517	C	ASN	B	102	67.861	8.827	6.227	1.000	24.40
ATOM	2518	O	ASN	B	102	67.974	7.665	5.835	1.000	29.49
ATOM	2519	N	LEU	B	103	66.686	9.356	6.540	1.000	26.99
ATOM	2520	CA	LEU	B	103	65.448	8.591	6.417	1.000	29.76
ATOM	2521	CB	LEU	B	103	64.314	9.311	7.147	1.000	29.43
ATOM	2522	CG	LEU	B	103	62.934	8.653	7.112	1.000	31.78
ATOM	2523	CD1	LEU	B	103	62.971	7.289	7.788	1.000	34.16
ATOM	2524	CD2	LEU	B	103	61.896	9.556	7.758	1.000	27.01
ATOM	2525	C	LEU	B	103	65.085	8.367	4.954	1.000	35.54
ATOM	2526	O	LEU	B	103	64.742	7.255	4.545	1.000	40.20
ATOM	2527	N	LYS	B	104	65.145	9.416	4.148	1.000	39.57
ATOM	2528	CA	LYS	B	104	64.863	9.329	2.721	1.000	42.48
ATOM	2529	CB	LYS	B	104	65.030	10.699	2.075	1.000	51.56
ATOM	2530	C	LYS	B	104	65.754	8.307	2.024	1.000	39.81
ATOM	2531	O	LYS	B	104	65.311	7.619	1.101	1.000	43.72
ATOM	2532	N	LYS	B	105	67.005	8.200	2.467	1.000	35.79
ATOM	2533	CA	LYS	B	105	67.924	7.211	1.915	1.000	35.08
ATOM	2534	CB	LYS	B	105	69.362	7.723	1.913	1.000	42.55
ATOM	2535	CG	LYS	B	105	69.810	8.431	0.648	1.000	52.17
ATOM	2536	CD	LYS	B	105	71.334	8.483	0.589	1.000	61.85
ATOM	2537	CE	LYS	B	105	71.944	7.291	1.310	1.000	67.77
ATOM	2538	NZ	LYS	B	105	73.111	7.657	2.157	1.000	69.80
ATOM	2539	C	LYS	B	105	67.886	5.909	2.705	1.000	32.76
ATOM	2540	O	LYS	B	105	68.341	4.878	2.205	1.000	33.06
ATOM	2541	N	GLY	B	106	67.367	5.936	3.932	1.000	26.52
ATOM	2542	CA	GLY	B	106	67.455	4.735	4.761	1.000	22.95
ATOM	2543	C	GLY	B	106	68.881	4.466	5.188	1.000	27.67
ATOM	2544	O	GLY	B	106	69.268	3.325	5.436	1.000	33.60
ATOM	2545	N	GLN	B	107	69.706	5.505	5.286	1.000	33.76
ATOM	2546	CA	GLN	B	107	71.137	5.336	5.486	1.000	30.81
ATOM	2547	CB	GLN	B	107	71.888	6.022	4.355	1.000	28.84
ATOM	2548	C	GLN	B	107	71.605	5.873	6.836	1.000	28.73
ATOM	2549	O	GLN	B	107	71.132	6.916	7.283	1.000	26.22
ATOM	2550	N	THR	B	108	72.524	5.136	7.439	1.000	28.78
ATOM	2551	CA	THR	B	108	73.069	5.396	8.764	1.000	30.06
ATOM	2552	CB	THR	B	108	72.901	4.154	9.665	1.000	27.78
ATOM	2553	OG1	THR	B	108	71.501	3.870	9.817	1.000	28.16
ATOM	2554	CG2	THR	B	108	73.471	4.405	11.051	1.000	26.31
ATOM	2555	C	THR	B	108	74.549	5.744	8.708	1.000	27.68
ATOM	2556	O	THR	B	108	75.304	5.055	8.017	1.000	28.23
ATOM	2557	N	HIS	B	109	74.971	6.780	9.423	1.000	26.32

ATOM	2558	CA	HIS	B	109	76.405	7.080	9.530	1.000	24.60
ATOM	2559	CB	HIS	B	109	76.595	8.232	10.498	1.000	25.11
ATOM	2560	CG	HIS	B	109	77.918	8.912	10.561	1.000	23.44
ATOM	2561	CD2	HIS	B	109	78.226	10.231	10.518	1.000	24.11
ATOM	2562	ND1	HIS	B	109	79.116	8.252	10.721	1.000	22.09
ATOM	2563	CE1	HIS	B	109	80.103	9.132	10.759	1.000	20.27
ATOM	2564	NE2	HIS	B	109	79.593	10.343	10.640	1.000	21.90
ATOM	2565	C	HIS	B	109	77.151	5.845	9.997	1.000	22.44
ATOM	2566	O	HIS	B	109	76.727	5.200	10.961	1.000	26.30
ATOM	2567	N	THR	B	110	78.256	5.471	9.354	1.000	23.04
ATOM	2568	CA	THR	B	110	78.923	4.256	9.823	1.000	21.12
ATOM	2569	CB	THR	B	110	79.894	3.654	8.791	1.000	22.73
ATOM	2570	OG1	THR	B	110	81.045	4.516	8.728	1.000	25.04
ATOM	2571	CG2	THR	B	110	79.256	3.561	7.413	1.000	19.23
ATOM	2572	C	THR	B	110	79.741	4.515	11.081	1.000	24.40
ATOM	2573	O	THR	B	110	80.307	5.592	11.265	1.000	31.84
ATOM	2574	N	LEU	B	111	79.821	3.500	11.937	1.000	27.00
ATOM	2575	CA	LEU	B	111	80.605	3.657	13.160	1.000	24.91
ATOM	2576	CB	LEU	B	111	80.522	2.369	13.980	1.000	26.44
ATOM	2577	CG	LEU	B	111	81.139	2.383	15.380	1.000	28.05
ATOM	2578	CD1	LEU	B	111	80.668	3.604	16.161	1.000	25.21
ATOM	2579	CD2	LEU	B	111	80.814	1.095	16.125	1.000	26.81
ATOM	2580	C	LEU	B	111	82.042	4.029	12.833	1.000	27.53
ATOM	2581	O	LEU	B	111	82.637	4.954	13.393	1.000	29.42
ATOM	2582	N	GLU	B	112	82.657	3.312	11.891	1.000	28.47
ATOM	2583	CA	GLU	B	112	84.097	3.523	11.692	1.000	32.01
ATOM	2584	CB	GLU	B	112	84.712	2.374	10.892	1.000	43.42
ATOM	2585	CG	GLU	B	112	85.202	1.218	11.745	1.000	58.71
ATOM	2586	CD	GLU	B	112	85.624	1.561	13.157	1.000	63.11
ATOM	2587	OE1	GLU	B	112	86.853	1.662	13.402	1.000	56.52
ATOM	2588	OE2	GLU	B	112	84.754	1.705	14.048	1.000	38.29
ATOM	2589	C	GLU	B	112	84.390	4.852	11.019	1.000	29.92
ATOM	2590	O	GLU	B	112	85.499	5.371	11.177	1.000	27.14
ATOM	2591	N	ASP	B	113	83.435	5.432	10.287	1.000	26.76
ATOM	2592	CA	ASP	B	113	83.634	6.806	9.832	1.000	23.28
ATOM	2593	CB	ASP	B	113	82.472	7.267	8.962	1.000	28.04
ATOM	2594	CG	ASP	B	113	82.718	7.128	7.474	1.000	31.68
ATOM	2595	OD1	ASP	B	113	83.873	6.857	7.094	1.000	28.93
ATOM	2596	OD2	ASP	B	113	81.748	7.292	6.704	1.000	29.11
ATOM	2597	C	ASP	B	113	83.774	7.745	11.033	1.000	23.71
ATOM	2598	O	ASP	B	113	84.565	8.688	11.039	1.000	25.19
ATOM	2599	N	PHE	B	114	82.981	7.481	12.078	1.000	23.64
ATOM	2600	CA	PHE	B	114	83.043	8.327	13.273	1.000	21.55
ATOM	2601	CB	PHE	B	114	81.856	8.044	14.192	1.000	21.55
ATOM	2602	CG	PHE	B	114	81.712	9.022	15.346	1.000	22.74
ATOM	2603	CD1	PHE	B	114	82.303	8.752	16.571	1.000	24.12
ATOM	2604	CD2	PHE	B	114	81.001	10.198	15.187	1.000	21.84
ATOM	2605	CE1	PHE	B	114	82.174	9.637	17.625	1.000	23.11
ATOM	2606	CE2	PHE	B	114	80.850	11.083	16.242	1.000	23.72
ATOM	2607	CZ	PHE	B	114	81.447	10.803	17.458	1.000	21.35
ATOM	2608	C	PHE	B	114	84.352	8.104	14.023	1.000	21.77
ATOM	2609	O	PHE	B	114	85.004	9.058	14.449	1.000	24.80
ATOM	2610	N	GLN	B	115	84.716	6.839	14.183	1.000	23.92
ATOM	2611	CA	GLN	B	115	85.919	6.434	14.898	1.000	26.72
ATOM	2612	CB	GLN	B	115	86.002	4.908	14.970	1.000	28.07
ATOM	2613	CG	GLN	B	115	87.126	4.379	15.851	1.000	29.18
ATOM	2614	CD	GLN	B	115	86.740	4.463	17.320	1.000	33.93
ATOM	2615	OE1	GLN	B	115	85.710	3.920	17.730	1.000	36.31
ATOM	2616	NE2	GLN	B	115	87.560	5.151	18.103	1.000	31.38
ATOM	2617	C	GLN	B	115	87.182	6.977	14.242	1.000	25.49
ATOM	2618	O	GLN	B	115	88.089	7.449	14.921	1.000	26.49

ATOM	2619	N	ARG	B	116	87.244	6.906	12.918	1.000	22.33
ATOM	2620	CA	ARG	B	116	88.433	7.339	12.188	1.000	24.36
ATOM	2621	CB	ARG	B	116	88.272	7.028	10.700	1.000	22.95
ATOM	2622	C	ARG	B	116	88.723	8.818	12.389	1.000	21.93
ATOM	2623	O	ARG	B	116	89.868	9.240	12.574	1.000	22.76
ATOM	2624	N	VAL	B	117	87.675	9.638	12.347	1.000	22.20
ATOM	2625	CA	VAL	B	117	87.852	11.084	12.441	1.000	20.72
ATOM	2626	CB	VAL	B	117	86.580	11.816	11.993	1.000	20.31
ATOM	2627	CG1	VAL	B	117	86.640	13.287	12.349	1.000	20.26
ATOM	2628	CG2	VAL	B	117	86.392	11.669	10.484	1.000	27.13
ATOM	2629	C	VAL	B	117	88.249	11.483	13.857	1.000	23.41
ATOM	2630	O	VAL	B	117	89.115	12.336	14.039	1.000	26.63
ATOM	2631	N	LEU	B	118	87.637	10.854	14.853	1.000	19.32
ATOM	2632	CA	LEU	B	118	88.020	10.966	16.248	1.000	23.34
ATOM	2633	CB	LEU	B	118	87.227	10.034	17.158	1.000	24.15
ATOM	2634	CG	LEU	B	118	85.754	10.307	17.433	1.000	36.11
ATOM	2635	CD1	LEU	B	118	85.303	9.517	18.654	1.000	34.48
ATOM	2636	CD2	LEU	B	118	85.495	11.793	17.617	1.000	37.25
ATOM	2637	C	LEU	B	118	89.497	10.591	16.424	1.000	21.18
ATOM	2638	O	LEU	B	118	90.305	11.315	16.996	1.000	24.74
ATOM	2639	N	ASP	B	119	89.826	9.409	15.907	1.000	19.51
ATOM	2640	CA	ASP	B	119	91.175	8.870	16.015	1.000	23.80
ATOM	2641	CB	ASP	B	119	91.255	7.538	15.259	1.000	22.73
ATOM	2642	CG	ASP	B	119	90.734	6.387	16.102	1.000	27.64
ATOM	2643	OD1	ASP	B	119	90.874	5.229	15.655	1.000	38.04
ATOM	2644	OD2	ASP	B	119	90.193	6.626	17.203	1.000	27.24
ATOM	2645	C	ASP	B	119	92.228	9.840	15.501	1.000	27.92
ATOM	2646	O	ASP	B	119	93.197	10.162	16.197	1.000	24.30
ATOM	2647	N	VAL	B	120	92.072	10.333	14.271	1.000	24.11
ATOM	2648	CA	VAL	B	120	93.094	11.250	13.774	1.000	21.70
ATOM	2649	CB	VAL	B	120	92.997	11.468	12.247	1.000	21.17
ATOM	2650	CG1	VAL	B	120	94.025	12.498	11.801	1.000	19.78
ATOM	2651	CG2	VAL	B	120	93.201	10.156	11.502	1.000	25.36
ATOM	2652	C	VAL	B	120	93.021	12.609	14.455	1.000	18.60
ATOM	2653	O	VAL	B	120	94.034	13.143	14.901	1.000	18.90
ATOM	2654	N	ASN	B	121	91.827	13.197	14.510	1.000	16.99
ATOM	2655	CA	ASN	B	121	91.699	14.592	14.914	1.000	19.35
ATOM	2656	CB	ASN	B	121	90.306	15.127	14.534	1.000	23.26
ATOM	2657	CG	ASN	B	121	90.183	15.419	13.051	1.000	26.22
ATOM	2658	OD1	ASN	B	121	91.063	15.040	12.278	1.000	26.76
ATOM	2659	ND2	ASN	B	121	89.110	16.088	12.650	1.000	19.20
ATOM	2660	C	ASN	B	121	91.894	14.825	16.409	1.000	19.21
ATOM	2661	O	ASN	B	121	92.515	15.818	16.774	1.000	21.98
ATOM	2662	N	LEU	B	122	91.341	13.944	17.232	1.000	20.95
ATOM	2663	CA	LEU	B	122	91.306	14.176	18.679	1.000	19.05
ATOM	2664	CB	LEU	B	122	89.905	13.857	19.189	1.000	18.59
ATOM	2665	CG	LEU	B	122	89.615	14.033	20.679	1.000	20.96
ATOM	2666	CD1	LEU	B	122	90.069	15.391	21.190	1.000	16.90
ATOM	2667	CD2	LEU	B	122	88.126	13.860	20.945	1.000	18.18
ATOM	2668	C	LEU	B	122	92.376	13.350	19.377	1.000	20.58
ATOM	2669	O	LEU	B	122	93.297	13.880	19.999	1.000	24.53
ATOM	2670	N	MET	B	123	92.291	12.025	19.278	1.000	19.48
ATOM	2671	CA	MET	B	123	93.308	11.158	19.874	1.000	22.29
ATOM	2672	CB	MET	B	123	92.982	9.693	19.590	1.000	22.09
ATOM	2673	CG	MET	B	123	93.957	8.703	20.207	1.000	23.89
ATOM	2674	SD	MET	B	123	95.361	8.365	19.122	1.000	29.30
ATOM	2675	CE	MET	B	123	94.591	7.184	18.008	1.000	26.18
ATOM	2676	C	MET	B	123	94.699	11.513	19.363	1.000	26.09
ATOM	2677	O	MET	B	123	95.641	11.661	20.142	1.000	23.77
ATOM	2678	N	GLY	B	124	94.829	11.663	18.043	1.000	22.76
ATOM	2679	CA	GLY	B	124	96.103	11.989	17.421	1.000	23.30

ATOM	2680	C	GLY	B	124	96.716	13.248	17.998	1.000	26.58
ATOM	2681	O	GLY	B	124	97.890	13.317	18.355	1.000	22.97
ATOM	2682	N	THR	B	125	95.907	14.299	18.113	1.000	20.71
ATOM	2683	CA	THR	B	125	96.370	15.521	18.762	1.000	18.75
ATOM	2684	CB	THR	B	125	95.285	16.611	18.685	1.000	22.80
ATOM	2685	OG1	THR	B	125	95.241	17.153	17.356	1.000	23.16
ATOM	2686	CG2	THR	B	125	95.604	17.748	19.648	1.000	15.94
ATOM	2687	C	THR	B	125	96.743	15.265	20.215	1.000	20.63
ATOM	2688	O	THR	B	125	97.778	15.746	20.683	1.000	23.52
ATOM	2689	N	PHE	B	126	95.948	14.514	20.983	1.000	20.41
ATOM	2690	CA	PHE	B	126	96.358	14.272	22.375	1.000	23.20
ATOM	2691	CB	PHE	B	126	95.263	13.545	23.158	1.000	19.10
ATOM	2692	CG	PHE	B	126	95.639	13.311	24.616	1.000	25.87
ATOM	2693	CD1	PHE	B	126	95.581	14.353	25.523	1.000	22.37
ATOM	2694	CD2	PHE	B	126	96.050	12.061	25.050	1.000	26.96
ATOM	2695	CE1	PHE	B	126	95.935	14.154	26.850	1.000	22.65
ATOM	2696	CE2	PHE	B	126	96.399	11.852	26.375	1.000	23.20
ATOM	2697	CZ	PHE	B	126	96.343	12.899	27.274	1.000	20.92
ATOM	2698	C	PHE	B	126	97.661	13.478	22.450	1.000	21.16
ATOM	2699	O	PHE	B	126	98.532	13.733	23.282	1.000	22.13
ATOM	2700	N	ASN	B	127	97.825	12.497	21.575	1.000	20.29
ATOM	2701	CA	ASN	B	127	99.040	11.690	21.502	1.000	22.57
ATOM	2702	CB	ASN	B	127	98.922	10.706	20.339	1.000	22.19
ATOM	2703	CG	ASN	B	127	99.979	9.621	20.359	1.000	28.15
ATOM	2704	OD1	ASN	B	127	100.400	9.142	21.411	1.000	27.23
ATOM	2705	ND2	ASN	B	127	100.399	9.231	19.159	1.000	23.88
ATOM	2706	C	ASN	B	127	100.287	12.547	21.334	1.000	26.24
ATOM	2707	O	ASN	B	127	101.293	12.353	22.021	1.000	27.74
ATOM	2708	N	VAL	B	128	100.239	13.509	20.412	1.000	21.97
ATOM	2709	CA	VAL	B	128	101.374	14.412	20.233	1.000	21.97
ATOM	2710	CB	VAL	B	128	101.182	15.276	18.969	1.000	25.49
ATOM	2711	CG1	VAL	B	128	102.234	16.367	18.881	1.000	18.12
ATOM	2712	CG2	VAL	B	128	101.212	14.383	17.730	1.000	21.07
ATOM	2713	C	VAL	B	128	101.571	15.300	21.454	1.000	24.63
ATOM	2714	O	VAL	B	128	102.697	15.551	21.878	1.000	24.16
ATOM	2715	N	ILE	B	129	100.482	15.802	22.040	1.000	21.34
ATOM	2716	CA	ILE	B	129	100.595	16.670	23.210	1.000	21.04
ATOM	2717	CB	ILE	B	129	99.207	17.164	23.671	1.000	21.80
ATOM	2718	CG2	ILE	B	129	99.282	17.704	25.093	1.000	15.16
ATOM	2719	CG1	ILE	B	129	98.559	18.184	22.731	1.000	19.30
ATOM	2720	CD1	ILE	B	129	97.089	18.395	23.009	1.000	20.24
ATOM	2721	C	ILE	B	129	101.259	15.977	24.395	1.000	21.07
ATOM	2722	O	ILE	B	129	102.160	16.538	25.019	1.000	24.73
ATOM	2723	N	ARG	B	130	100.821	14.766	24.722	1.000	22.23
ATOM	2724	CA	ARG	B	130	101.320	14.074	25.907	1.000	23.38
ATOM	2725	CB	ARG	B	130	100.465	12.830	26.183	1.000	21.66
ATOM	2726	CG	ARG	B	130	100.867	11.603	25.400	1.000	20.29
ATOM	2727	CD	ARG	B	130	99.789	10.542	25.265	1.000	18.80
ATOM	2728	NE	ARG	B	130	100.255	9.485	24.364	1.000	22.82
ATOM	2729	CZ	ARG	B	130	101.032	8.465	24.704	1.000	28.05
ATOM	2730	NH1	ARG	B	130	101.403	7.563	23.800	1.000	23.90
ATOM	2731	NH2	ARG	B	130	101.461	8.305	25.951	1.000	20.66
ATOM	2732	C	ARG	B	130	102.791	13.701	25.769	1.000	29.73
ATOM	2733	O	ARG	B	130	103.571	13.761	26.724	1.000	23.87
ATOM	2734	N	LEU	B	131	103.193	13.303	24.568	1.000	27.25
ATOM	2735	CA	LEU	B	131	104.565	12.913	24.278	1.000	25.57
ATOM	2736	CB	LEU	B	131	104.620	12.045	23.019	1.000	26.19
ATOM	2737	CG	LEU	B	131	103.911	10.689	23.075	1.000	28.61
ATOM	2738	CD1	LEU	B	131	103.958	9.978	21.721	1.000	23.83
ATOM	2739	CD2	LEU	B	131	104.513	9.786	24.142	1.000	31.07
ATOM	2740	C	LEU	B	131	105.445	14.145	24.144	1.000	26.19

ATOM	2741	O	LEU	B	131	106.565	14.195	24.663	1.000	25.39
ATOM	2742	N	VAL	B	132	104.963	15.186	23.466	1.000	21.11
ATOM	2743	CA	VAL	B	132	105.780	16.391	23.341	1.000	17.60
ATOM	2744	CB	VAL	B	132	105.279	17.364	22.261	1.000	22.25
ATOM	2745	CG1	VAL	B	132	104.101	18.197	22.728	1.000	23.13
ATOM	2746	CG2	VAL	B	132	106.413	18.301	21.850	1.000	24.17
ATOM	2747	C	VAL	B	132	105.874	17.116	24.680	1.000	23.10
ATOM	2748	O	VAL	B	132	106.892	17.766	24.950	1.000	25.24
ATOM	2749	N	ALA	B	133	104.857	17.013	25.537	1.000	20.04
ATOM	2750	CA	ALA	B	133	104.985	17.654	26.852	1.000	22.03
ATOM	2751	CB	ALA	B	133	103.694	17.515	27.645	1.000	19.47
ATOM	2752	C	ALA	B	133	106.160	17.075	27.631	1.000	21.84
ATOM	2753	O	ALA	B	133	106.872	17.783	28.342	1.000	23.39
ATOM	2754	N	GLY	B	134	106.368	15.771	27.498	1.000	24.23
ATOM	2755	CA	GLY	B	134	107.452	15.085	28.179	1.000	31.61
ATOM	2756	C	GLY	B	134	108.812	15.508	27.658	1.000	34.00
ATOM	2757	O	GLY	B	134	109.784	15.551	28.414	1.000	29.77
ATOM	2758	N	GLU	B	135	108.886	15.826	26.367	1.000	33.32
ATOM	2759	CA	GLU	B	135	110.100	16.386	25.792	1.000	28.56
ATOM	2760	CB	GLU	B	135	110.039	16.427	24.262	1.000	27.20
ATOM	2761	CG	GLU	B	135	109.843	15.075	23.597	1.000	28.76
ATOM	2762	CD	GLU	B	135	111.100	14.232	23.700	1.000	35.06
ATOM	2763	OE1	GLU	B	135	110.992	13.012	23.929	1.000	47.85
ATOM	2764	OE2	GLU	B	135	112.204	14.795	23.561	1.000	44.39
ATOM	2765	C	GLU	B	135	110.324	17.805	26.301	1.000	27.32
ATOM	2766	O	GLU	B	135	111.437	18.185	26.662	1.000	26.88
ATOM	2767	N	MET	B	136	109.245	18.602	26.317	1.000	22.38
ATOM	2768	CA	MET	B	136	109.416	19.995	26.725	1.000	22.02
ATOM	2769	CB	MET	B	136	108.151	20.800	26.448	1.000	23.97
ATOM	2770	CG	MET	B	136	107.833	21.067	24.990	1.000	28.51
ATOM	2771	SD	MET	B	136	106.121	21.622	24.802	1.000	26.00
ATOM	2772	CE	MET	B	136	106.071	22.029	23.057	1.000	22.80
ATOM	2773	C	MET	B	136	109.767	20.084	28.205	1.000	20.95
ATOM	2774	O	MET	B	136	110.397	21.035	28.665	1.000	27.02
ATOM	2775	N	GLY	B	137	109.343	19.092	28.983	1.000	23.73
ATOM	2776	CA	GLY	B	137	109.638	19.135	30.413	1.000	30.04
ATOM	2777	C	GLY	B	137	111.125	19.064	30.698	1.000	32.99
ATOM	2778	O	GLY	B	137	111.555	19.376	31.812	1.000	33.93
ATOM	2779	N	GLN	B	138	111.925	18.658	29.718	1.000	29.39
ATOM	2780	CA	GLN	B	138	113.375	18.581	29.892	1.000	28.86
ATOM	2781	CB	GLN	B	138	113.963	17.515	28.976	1.000	34.26
ATOM	2782	C	GLN	B	138	114.033	19.924	29.635	1.000	31.61
ATOM	2783	O	GLN	B	138	115.205	20.149	29.939	1.000	33.07
ATOM	2784	N	ASN	B	139	113.297	20.877	29.059	1.000	30.51
ATOM	2785	CA	ASN	B	139	113.904	22.175	28.786	1.000	29.96
ATOM	2786	CB	ASN	B	139	113.033	22.995	27.840	1.000	31.82
ATOM	2787	CG	ASN	B	139	112.839	22.378	26.470	1.000	37.24
ATOM	2788	OD1	ASN	B	139	113.667	21.614	25.973	1.000	30.68
ATOM	2789	ND2	ASN	B	139	111.710	22.731	25.850	1.000	28.36
ATOM	2790	C	ASN	B	139	114.095	22.959	30.076	1.000	34.50
ATOM	2791	O	ASN	B	139	113.248	22.886	30.972	1.000	32.01
ATOM	2792	N	GLU	B	140	115.187	23.712	30.169	1.000	31.95
ATOM	2793	CA	GLU	B	140	115.309	24.671	31.263	1.000	32.60
ATOM	2794	CB	GLU	B	140	116.719	25.220	31.373	1.000	36.62
ATOM	2795	C	GLU	B	140	114.304	25.799	31.033	1.000	31.18
ATOM	2796	O	GLU	B	140	114.197	26.259	29.896	1.000	28.53
ATOM	2797	N	PRO	B	141	113.584	26.229	32.058	1.000	31.88
ATOM	2798	CD	PRO	B	141	113.641	25.759	33.456	1.000	30.29
ATOM	2799	CA	PRO	B	141	112.590	27.290	31.875	1.000	31.37
ATOM	2800	CB	PRO	B	141	112.002	27.495	33.271	1.000	32.31
ATOM	2801	CG	PRO	B	141	112.345	26.259	34.028	1.000	30.62

ATOM	2802	C	PRO	B	141	113.257	28.576	31.408	1.000	36.56
ATOM	2803	O	PRO	B	141	114.386	28.849	31.811	1.000	38.29
ATOM	2804	N	ASP	B	142	112.578	29.361	30.577	1.000	32.11
ATOM	2805	CA	ASP	B	142	113.190	30.602	30.108	1.000	29.02
ATOM	2806	CB	ASP	B	142	112.523	31.107	28.835	1.000	34.13
ATOM	2807	CG	ASP	B	142	111.042	31.388	28.975	1.000	35.91
ATOM	2808	OD1	ASP	B	142	110.540	31.478	30.114	1.000	27.63
ATOM	2809	OD2	ASP	B	142	110.383	31.505	27.919	1.000	36.65
ATOM	2810	C	ASP	B	142	113.113	31.659	31.199	1.000	35.02
ATOM	2811	O	ASP	B	142	112.733	31.348	32.329	1.000	34.17
ATOM	2812	N	GLN	B	143	113.459	32.893	30.853	1.000	35.14
ATOM	2813	CA	GLN	B	143	113.391	34.002	31.801	1.000	37.94
ATOM	2814	CB	GLN	B	143	113.878	35.288	31.147	1.000	37.47
ATOM	2815	C	GLN	B	143	111.979	34.184	32.344	1.000	39.06
ATOM	2816	O	GLN	B	143	111.781	34.729	33.431	1.000	37.62
ATOM	2817	N	GLY	B	144	110.979	33.726	31.593	1.000	33.77
ATOM	2818	CA	GLY	B	144	109.590	33.862	32.005	1.000	29.37
ATOM	2819	C	GLY	B	144	109.113	32.632	32.746	1.000	29.22
ATOM	2820	O	GLY	B	144	107.965	32.517	33.166	1.000	31.92
ATOM	2821	N	GLY	B	145	110.023	31.673	32.916	1.000	28.73
ATOM	2822	CA	GLY	B	145	109.679	30.408	33.540	1.000	27.23
ATOM	2823	C	GLY	B	145	109.010	29.468	32.550	1.000	28.54
ATOM	2824	O	GLY	B	145	108.404	28.469	32.947	1.000	26.30
ATOM	2825	N	GLN	B	146	109.115	29.772	31.257	1.000	26.91
ATOM	2826	CA	GLN	B	146	108.395	28.963	30.274	1.000	27.98
ATOM	2827	CB	GLN	B	146	107.862	29.872	29.154	1.000	24.94
ATOM	2828	CG	GLN	B	146	106.886	29.135	28.247	1.000	32.11
ATOM	2829	CD	GLN	B	146	106.239	30.065	27.238	1.000	27.79
ATOM	2830	OE1	GLN	B	146	105.335	30.822	27.576	1.000	24.50
ATOM	2831	NE2	GLN	B	146	106.727	29.988	26.002	1.000	27.50
ATOM	2832	C	GLN	B	146	109.243	27.863	29.657	1.000	26.64
ATOM	2833	O	GLN	B	146	110.385	28.076	29.246	1.000	27.40
ATOM	2834	N	ARG	B	147	108.680	26.659	29.551	1.000	20.15
ATOM	2835	CA	ARG	B	147	109.392	25.561	28.913	1.000	21.33
ATOM	2836	CB	ARG	B	147	109.340	24.300	29.782	1.000	22.83
ATOM	2837	CG	ARG	B	147	110.180	24.362	31.062	1.000	22.46
ATOM	2838	CD	ARG	B	147	110.143	22.991	31.707	1.000	25.58
ATOM	2839	NE	ARG	B	147	111.072	22.800	32.805	1.000	26.67
ATOM	2840	CZ	ARG	B	147	110.759	22.976	34.080	1.000	32.90
ATOM	2841	NH1	ARG	B	147	111.670	22.773	35.023	1.000	35.72
ATOM	2842	NH2	ARG	B	147	109.528	23.358	34.404	1.000	28.27
ATOM	2843	C	ARG	B	147	108.820	25.211	27.544	1.000	29.41
ATOM	2844	O	ARG	B	147	109.465	24.482	26.784	1.000	24.64
ATOM	2845	N	GLY	B	148	107.613	25.681	27.214	1.000	26.59
ATOM	2846	CA	GLY	B	148	107.026	25.263	25.945	1.000	23.20
ATOM	2847	C	GLY	B	148	105.685	25.932	25.685	1.000	28.53
ATOM	2848	O	GLY	B	148	105.068	26.467	26.610	1.000	20.78
ATOM	2849	N	VAL	B	149	105.245	25.895	24.434	1.000	24.83
ATOM	2850	CA	VAL	B	149	103.944	26.359	23.980	1.000	22.50
ATOM	2851	CB	VAL	B	149	104.009	27.711	23.253	1.000	22.87
ATOM	2852	CG1	VAL	B	149	102.597	28.262	23.025	1.000	25.59
ATOM	2853	CG2	VAL	B	149	104.853	28.720	24.007	1.000	28.65
ATOM	2854	C	VAL	B	149	103.335	25.328	23.027	1.000	24.60
ATOM	2855	O	VAL	B	149	103.985	24.928	22.062	1.000	21.79
ATOM	2856	N	ILE	B	150	102.115	24.886	23.299	1.000	22.21
ATOM	2857	CA	ILE	B	150	101.412	23.931	22.457	1.000	22.43
ATOM	2858	CB	ILE	B	150	101.063	22.642	23.214	1.000	24.72
ATOM	2859	CG2	ILE	B	150	100.208	21.687	22.386	1.000	19.63
ATOM	2860	CG1	ILE	B	150	102.294	21.896	23.756	1.000	21.59
ATOM	2861	CD1	ILE	B	150	101.918	20.680	24.581	1.000	23.41
ATOM	2862	C	ILE	B	150	100.145	24.584	21.898	1.000	24.76

ATOM	2863	O	ILE	B	150	99.353	25.137	22.662	1.000	21.45
ATOM	2864	N	ILE	B	151	99.976	24.532	20.581	1.000	22.74
ATOM	2865	CA	ILE	B	151	98.836	25.139	19.898	1.000	18.41
ATOM	2866	CB	ILE	B	151	99.262	26.272	18.954	1.000	20.13
ATOM	2867	CG2	ILE	B	151	98.063	27.005	18.358	1.000	13.13
ATOM	2868	CG1	ILE	B	151	100.225	27.281	19.595	1.000	23.87
ATOM	2869	CD1	ILE	B	151	100.757	28.306	18.615	1.000	27.17
ATOM	2870	C	ILE	B	151	98.090	24.068	19.118	1.000	20.55
ATOM	2871	O	ILE	B	151	98.702	23.387	18.295	1.000	22.75
ATOM	2872	N	ASN	B	152	96.800	23.922	19.383	1.000	20.72
ATOM	2873	CA	ASN	B	152	95.978	22.934	18.701	1.000	18.58
ATOM	2874	CB	ASN	B	152	95.082	22.197	19.702	1.000	18.64
ATOM	2875	CG	ASN	B	152	95.890	21.725	20.896	1.000	22.42
ATOM	2876	OD1	ASN	B	152	95.586	22.026	22.051	1.000	31.28
ATOM	2877	ND2	ASN	B	152	96.954	20.977	20.642	1.000	15.90
ATOM	2878	C	ASN	B	152	95.116	23.588	17.627	1.000	21.08
ATOM	2879	O	ASN	B	152	94.934	24.805	17.623	1.000	20.68
ATOM	2880	N	THR	B	153	94.584	22.782	16.721	1.000	20.37
ATOM	2881	CA	THR	B	153	93.670	23.303	15.706	1.000	21.06
ATOM	2882	CB	THR	B	153	94.149	23.034	14.273	1.000	21.72
ATOM	2883	OG1	THR	B	153	95.481	23.558	14.123	1.000	20.20
ATOM	2884	CG2	THR	B	153	93.262	23.760	13.272	1.000	18.62
ATOM	2885	C	THR	B	153	92.299	22.668	15.923	1.000	19.15
ATOM	2886	O	THR	B	153	92.150	21.460	15.761	1.000	21.82
ATOM	2887	N	ALA	B	154	91.337	23.499	16.317	1.000	17.65
ATOM	2888	CA	ALA	B	154	89.967	23.002	16.451	1.000	22.08
ATOM	2889	CB	ALA	B	154	89.255	23.587	17.656	1.000	19.39
ATOM	2890	C	ALA	B	154	89.252	23.339	15.138	1.000	21.89
ATOM	2891	O	ALA	B	154	89.788	22.995	14.076	1.000	21.95
ATOM	2892	N	SER	B	155	88.113	24.003	15.248	1.000	19.65
ATOM	2893	CA	SER	B	155	87.331	24.459	14.112	1.000	19.95
ATOM	2894	CB	SER	B	155	86.953	23.281	13.212	1.000	19.33
ATOM	2895	OG	SER	B	155	85.898	23.638	12.326	1.000	20.16
ATOM	2896	C	SER	B	155	86.071	25.161	14.598	1.000	20.44
ATOM	2897	O	SER	B	155	85.582	24.855	15.684	1.000	19.66
ATOM	2898	N	VAL	B	156	85.494	26.082	13.832	1.000	16.22
ATOM	2899	CA	VAL	B	156	84.216	26.649	14.282	1.000	16.46
ATOM	2900	CB	VAL	B	156	83.758	27.804	13.390	1.000	22.77
ATOM	2901	CG1	VAL	B	156	84.736	28.970	13.469	1.000	23.36
ATOM	2902	CG2	VAL	B	156	83.614	27.320	11.952	1.000	25.09
ATOM	2903	C	VAL	B	156	83.130	25.577	14.345	1.000	19.15
ATOM	2904	O	VAL	B	156	82.119	25.778	15.042	1.000	21.77
ATOM	2905	N	ALA	B	157	83.315	24.438	13.682	1.000	17.00
ATOM	2906	CA	ALA	B	157	82.380	23.321	13.744	1.000	17.11
ATOM	2907	CB	ALA	B	157	82.779	22.211	12.782	1.000	13.23
ATOM	2908	C	ALA	B	157	82.250	22.758	15.157	1.000	22.42
ATOM	2909	O	ALA	B	157	81.307	22.027	15.471	1.000	24.11
ATOM	2910	N	ALA	B	158	83.190	23.098	16.028	1.000	22.00
ATOM	2911	CA	ALA	B	158	83.094	22.828	17.447	1.000	22.62
ATOM	2912	CB	ALA	B	158	84.350	23.302	18.173	1.000	19.72
ATOM	2913	C	ALA	B	158	81.882	23.544	18.043	1.000	23.87
ATOM	2914	O	ALA	B	158	81.312	23.092	19.036	1.000	23.62
ATOM	2915	N	PHE	B	159	81.514	24.670	17.437	1.000	21.51
ATOM	2916	CA	PHE	B	159	80.464	25.527	17.981	1.000	22.39
ATOM	2917	CB	PHE	B	159	81.035	26.942	18.156	1.000	21.64
ATOM	2918	CG	PHE	B	159	82.255	26.961	19.067	1.000	24.89
ATOM	2919	CD1	PHE	B	159	83.487	27.354	18.565	1.000	23.04
ATOM	2920	CD2	PHE	B	159	82.143	26.589	20.397	1.000	24.09
ATOM	2921	CE1	PHE	B	159	84.599	27.372	19.393	1.000	24.68
ATOM	2922	CE2	PHE	B	159	83.250	26.603	21.229	1.000	24.96
ATOM	2923	CZ	PHE	B	159	84.473	26.994	20.721	1.000	22.41

ATOM	2924	C	PHE	B	159	79.200	25.585	17.133	1.000	25.85
ATOM	2925	O	PHE	B	159	78.100	25.721	17.687	1.000	21.57
ATOM	2926	N	GLU	B	160	79.327	25.497	15.813	1.000	22.51
ATOM	2927	CA	GLU	B	160	78.181	25.504	14.910	1.000	23.96
ATOM	2928	CB	GLU	B	160	78.041	26.820	14.150	1.000	26.01
ATOM	2929	CG	GLU	B	160	77.979	28.098	14.948	1.000	32.94
ATOM	2930	CD	GLU	B	160	79.247	28.924	14.932	1.000	33.82
ATOM	2931	OE1	GLU	B	160	79.637	29.411	16.013	1.000	28.19
ATOM	2932	OE2	GLU	B	160	79.877	29.109	13.866	1.000	27.13
ATOM	2933	C	GLU	B	160	78.309	24.378	13.880	1.000	22.36
ATOM	2934	O	GLU	B	160	78.302	24.652	12.675	1.000	26.67
ATOM	2935	N	GLY	B	161	78.442	23.144	14.329	1.000	18.77
ATOM	2936	CA	GLY	B	161	78.615	22.033	13.392	1.000	22.85
ATOM	2937	C	GLY	B	161	77.447	22.008	12.412	1.000	25.07
ATOM	2938	O	GLY	B	161	76.305	22.215	12.818	1.000	20.77
ATOM	2939	N	GLN	B	162	77.735	21.776	11.142	1.000	23.20
ATOM	2940	CA	GLN	B	162	76.717	21.802	10.100	1.000	25.68
ATOM	2941	CB	GLN	B	162	77.327	22.268	8.772	1.000	21.32
ATOM	2942	CG	GLN	B	162	78.011	23.621	8.830	1.000	22.80
ATOM	2943	CD	GLN	B	162	78.260	24.186	7.447	1.000	26.50
ATOM	2944	OE1	GLN	B	162	79.170	23.717	6.765	1.000	30.69
ATOM	2945	NE2	GLN	B	162	77.474	25.170	7.034	1.000	19.53
ATOM	2946	C	GLN	B	162	76.097	20.430	9.898	1.000	23.24
ATOM	2947	O	GLN	B	162	76.613	19.436	10.411	1.000	23.86
ATOM	2948	N	VAL	B	163	75.010	20.370	9.133	1.000	23.04
ATOM	2949	CA	VAL	B	163	74.513	19.067	8.695	1.000	23.64
ATOM	2950	CB	VAL	B	163	73.359	19.190	7.685	1.000	21.10
ATOM	2951	CG1	VAL	B	163	73.011	17.821	7.112	1.000	24.07
ATOM	2952	CG2	VAL	B	163	72.124	19.807	8.331	1.000	18.88
ATOM	2953	C	VAL	B	163	75.656	18.277	8.048	1.000	25.39
ATOM	2954	O	VAL	B	163	76.390	18.822	7.216	1.000	28.18
ATOM	2955	N	GLY	B	164	75.804	17.016	8.423	1.000	24.05
ATOM	2956	CA	GLY	B	164	76.838	16.139	7.902	1.000	22.74
ATOM	2957	C	GLY	B	164	78.105	16.104	8.741	1.000	25.15
ATOM	2958	O	GLY	B	164	78.930	15.201	8.552	1.000	25.10
ATOM	2959	N	GLN	B	165	78.283	17.062	9.643	1.000	22.51
ATOM	2960	CA	GLN	B	165	79.519	17.249	10.387	1.000	24.93
ATOM	2961	CB	GLN	B	165	79.788	18.752	10.551	1.000	23.90
ATOM	2962	CG	GLN	B	165	80.258	19.481	9.310	1.000	30.10
ATOM	2963	CD	GLN	B	165	80.846	20.839	9.652	1.000	31.96
ATOM	2964	OE1	GLN	B	165	80.265	21.595	10.432	1.000	28.58
ATOM	2965	NE2	GLN	B	165	82.002	21.157	9.072	1.000	32.65
ATOM	2966	C	GLN	B	165	79.551	16.655	11.789	1.000	23.68
ATOM	2967	O	GLN	B	165	80.385	17.071	12.594	1.000	24.30
ATOM	2968	N	ALA	B	166	78.686	15.714	12.126	1.000	21.51
ATOM	2969	CA	ALA	B	166	78.662	15.164	13.481	1.000	20.54
ATOM	2970	CB	ALA	B	166	77.593	14.089	13.571	1.000	18.83
ATOM	2971	C	ALA	B	166	80.014	14.619	13.924	1.000	25.40
ATOM	2972	O	ALA	B	166	80.485	14.947	15.018	1.000	25.59
ATOM	2973	N	ALA	B	167	80.685	13.787	13.132	1.000	23.03
ATOM	2974	CA	ALA	B	167	81.962	13.230	13.597	1.000	21.41
ATOM	2975	CB	ALA	B	167	82.413	12.108	12.678	1.000	21.78
ATOM	2976	C	ALA	B	167	83.041	14.294	13.736	1.000	22.03
ATOM	2977	O	ALA	B	167	83.735	14.367	14.758	1.000	24.57
ATOM	2978	N	TYR	B	168	83.200	15.138	12.732	1.000	16.78
ATOM	2979	CA	TYR	B	168	84.171	16.217	12.748	1.000	18.49
ATOM	2980	CB	TYR	B	168	84.094	17.005	11.444	1.000	20.42
ATOM	2981	CG	TYR	B	168	85.185	18.007	11.174	1.000	17.98
ATOM	2982	CD1	TYR	B	168	86.463	17.607	10.803	1.000	21.16
ATOM	2983	CE1	TYR	B	168	87.460	18.536	10.555	1.000	20.16
ATOM	2984	CD2	TYR	B	168	84.942	19.370	11.282	1.000	17.16

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ATOM   2985  CE2 TYR B 168      85.930  20.301  11.035 1.000 21.08
ATOM   2986  CZ  TYR B 168      87.192  19.875  10.670 1.000 23.37
ATOM   2987  OH  TYR B 168      88.163  20.821  10.429 1.000 24.37
ATOM   2988  C   TYR B 168      83.921  17.154  13.927 1.000 24.27
ATOM   2989  O   TYR B 168      84.858  17.511  14.641 1.000 20.90
ATOM   2990  N   SER B 169      82.652  17.544  14.099 1.000 18.79
ATOM   2991  CA  SER B 169      82.284  18.430  15.190 1.000 18.00
ATOM   2992  CB  SER B 169      80.801  18.780  15.129 1.000 21.17
ATOM   2993  OG  SER B 169      80.533  19.822  14.200 1.000 21.93
ATOM   2994  C   SER B 169      82.627  17.795  16.537 1.000 23.23
ATOM   2995  O   SER B 169      83.059  18.494  17.452 1.000 24.85
ATOM   2996  N   ALA B 170      82.432  16.486  16.638 1.000 21.87
ATOM   2997  CA  ALA B 170      82.720  15.772  17.875 1.000 21.87
ATOM   2998  CB  ALA B 170      82.330  14.309  17.743 1.000 18.73
ATOM   2999  C   ALA B 170      84.203  15.900  18.221 1.000 25.27
ATOM   3000  O   ALA B 170      84.587  16.203  19.351 1.000 19.26
ATOM   3001  N   SER B 171      85.004  15.648  17.185 1.000 19.22
ATOM   3002  CA  SER B 171      86.454  15.647  17.335 1.000 19.66
ATOM   3003  CB  SER B 171      87.128  15.093  16.073 1.000 18.82
ATOM   3004  OG  SER B 171      87.134  16.064  15.033 1.000 21.75
ATOM   3005  C   SER B 171      86.960  17.044  17.654 1.000 23.15
ATOM   3006  O   SER B 171      87.856  17.202  18.489 1.000 24.32
ATOM   3007  N   LYS B 172      86.395  18.073  17.009 1.000 20.33
ATOM   3008  CA  LYS B 172      86.919  19.420  17.255 1.000 19.93
ATOM   3009  CB  LYS B 172      86.592  20.350  16.084 1.000 17.49
ATOM   3010  CG  LYS B 172      87.296  19.943  14.791 1.000 19.56
ATOM   3011  CD  LYS B 172      88.807  19.836  14.962 1.000 20.06
ATOM   3012  CE  LYS B 172      89.525  19.640  13.636 1.000 22.40
ATOM   3013  NZ  LYS B 172      91.012  19.804  13.754 1.000 14.90
ATOM   3014  C   LYS B 172      86.413  19.968  18.588 1.000 22.62
ATOM   3015  O   LYS B 172      87.101  20.753  19.247 1.000 20.13
ATOM   3016  N   GLY B 173      85.221  19.547  18.993 1.000 20.91
ATOM   3017  CA  GLY B 173      84.689  19.941  20.296 1.000 18.93
ATOM   3018  C   GLY B 173      85.520  19.315  21.406 1.000 20.82
ATOM   3019  O   GLY B 173      85.720  19.940  22.447 1.000 24.27
ATOM   3020  N   GLY B 174      86.005  18.106  21.175 1.000 18.50
ATOM   3021  CA  GLY B 174      86.899  17.424  22.109 1.000 17.33
ATOM   3022  C   GLY B 174      88.200  18.187  22.265 1.000 22.82
ATOM   3023  O   GLY B 174      88.694  18.342  23.382 1.000 17.85
ATOM   3024  N   ILE B 175      88.762  18.676  21.149 1.000 23.77
ATOM   3025  CA  ILE B 175      89.953  19.506  21.251 1.000 18.10
ATOM   3026  CB  ILE B 175      90.512  19.945  19.888 1.000 23.18
ATOM   3027  CG2 ILE B 175      91.745  20.818  20.126 1.000 14.17
ATOM   3028  CG1 ILE B 175      90.847  18.832  18.900 1.000 20.34
ATOM   3029  CD1 ILE B 175      92.017  17.985  19.344 1.000 28.39
ATOM   3030  C   ILE B 175      89.667  20.770  22.057 1.000 19.76
ATOM   3031  O   ILE B 175      90.452  21.171  22.919 1.000 21.09
ATOM   3032  N   VAL B 176      88.537  21.418  21.770 1.000 13.27
ATOM   3033  CA  VAL B 176      88.169  22.577  22.589 1.000 16.26
ATOM   3034  CB  VAL B 176      86.848  23.209  22.129 1.000 20.98
ATOM   3035  CG1 VAL B 176      86.280  24.144  23.187 1.000 17.07
ATOM   3036  CG2 VAL B 176      87.045  23.961  20.813 1.000 19.89
ATOM   3037  C   VAL B 176      88.069  22.181  24.066 1.000 18.42
ATOM   3038  O   VAL B 176      88.643  22.846  24.932 1.000 19.91
ATOM   3039  N   GLY B 177      87.352  21.108  24.367 1.000 18.87
ATOM   3040  CA  GLY B 177      87.058  20.737  25.745 1.000 21.80
ATOM   3041  C   GLY B 177      88.273  20.415  26.584 1.000 25.98
ATOM   3042  O   GLY B 177      88.351  20.701  27.785 1.000 19.39
ATOM   3043  N   MET B 178      89.275  19.784  25.961 1.000 20.82
ATOM   3044  CA  MET B 178      90.460  19.398  26.718 1.000 18.94
ATOM   3045  CB  MET B 178      91.065  18.115  26.138 1.000 20.57
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ATOM	3046	CG	MET	B	178	91.703	18.285	24.763	1.000	20.96
ATOM	3047	SD	MET	B	178	92.375	16.749	24.092	1.000	24.89
ATOM	3048	CE	MET	B	178	93.471	17.405	22.833	1.000	17.24
ATOM	3049	C	MET	B	178	91.491	20.514	26.750	1.000	21.46
ATOM	3050	O	MET	B	178	92.536	20.344	27.390	1.000	22.19
ATOM	3051	N	THR	B	179	91.227	21.638	26.084	1.000	17.14
ATOM	3052	CA	THR	B	179	92.236	22.705	26.048	1.000	15.87
ATOM	3053	CB	THR	B	179	91.795	23.851	25.128	1.000	19.17
ATOM	3054	OG1	THR	B	179	91.840	23.407	23.763	1.000	18.87
ATOM	3055	CG2	THR	B	179	92.744	25.035	25.181	1.000	15.02
ATOM	3056	C	THR	B	179	92.555	23.238	27.439	1.000	24.29
ATOM	3057	O	THR	B	179	93.725	23.373	27.819	1.000	19.80
ATOM	3058	N	LEU	B	180	91.541	23.553	28.242	1.000	21.27
ATOM	3059	CA	LEU	B	180	91.803	24.095	29.574	1.000	19.96
ATOM	3060	CB	LEU	B	180	90.523	24.644	30.212	1.000	14.13
ATOM	3061	CG	LEU	B	180	90.683	25.218	31.623	1.000	23.37
ATOM	3062	CD1	LEU	B	180	91.668	26.377	31.621	1.000	24.56
ATOM	3063	CD2	LEU	B	180	89.332	25.648	32.181	1.000	23.02
ATOM	3064	C	LEU	B	180	92.424	23.078	30.525	1.000	18.79
ATOM	3065	O	LEU	B	180	93.438	23.415	31.163	1.000	24.04
ATOM	3066	N	PRO	B	181	91.861	21.889	30.685	1.000	18.00
ATOM	3067	CD	PRO	B	181	90.665	21.327	30.040	1.000	19.72
ATOM	3068	CA	PRO	B	181	92.454	20.940	31.646	1.000	19.59
ATOM	3069	CB	PRO	B	181	91.563	19.705	31.534	1.000	23.04
ATOM	3070	CG	PRO	B	181	90.850	19.848	30.226	1.000	20.73
ATOM	3071	C	PRO	B	181	93.896	20.594	31.292	1.000	27.33
ATOM	3072	O	PRO	B	181	94.739	20.409	32.174	1.000	20.10
ATOM	3073	N	ILE	B	182	94.220	20.508	29.996	1.000	19.63
ATOM	3074	CA	ILE	B	182	95.634	20.247	29.679	1.000	18.27
ATOM	3075	CB	ILE	B	182	95.813	19.877	28.200	1.000	20.42
ATOM	3076	CG2	ILE	B	182	97.282	19.829	27.808	1.000	18.13
ATOM	3077	CG1	ILE	B	182	95.125	18.561	27.833	1.000	17.30
ATOM	3078	CD1	ILE	B	182	95.026	18.293	26.345	1.000	19.94
ATOM	3079	C	ILE	B	182	96.470	21.450	30.080	1.000	22.64
ATOM	3080	O	ILE	B	182	97.552	21.273	30.648	1.000	23.28
ATOM	3081	N	ALA	B	183	95.981	22.665	29.823	1.000	16.56
ATOM	3082	CA	ALA	B	183	96.716	23.844	30.270	1.000	17.31
ATOM	3083	CB	ALA	B	183	96.034	25.129	29.836	1.000	20.13
ATOM	3084	C	ALA	B	183	96.877	23.807	31.787	1.000	22.11
ATOM	3085	O	ALA	B	183	97.921	24.140	32.343	1.000	17.99
ATOM	3086	N	ARG	B	184	95.829	23.388	32.492	1.000	19.71
ATOM	3087	CA	ARG	B	184	95.925	23.319	33.956	1.000	22.24
ATOM	3088	CB	ARG	B	184	94.538	23.027	34.551	1.000	15.89
ATOM	3089	CG	ARG	B	184	93.616	24.229	34.372	1.000	15.80
ATOM	3090	CD	ARG	B	184	92.143	23.879	34.567	1.000	18.23
ATOM	3091	NE	ARG	B	184	91.434	25.074	35.063	1.000	23.39
ATOM	3092	CZ	ARG	B	184	90.228	25.034	35.628	1.000	21.65
ATOM	3093	NH1	ARG	B	184	89.675	26.163	36.047	1.000	18.77
ATOM	3094	NH2	ARG	B	184	89.596	23.878	35.757	1.000	17.16
ATOM	3095	C	ARG	B	184	96.971	22.287	34.361	1.000	19.92
ATOM	3096	O	ARG	B	184	97.823	22.537	35.216	1.000	18.04
ATOM	3097	N	ASP	B	185	96.925	21.123	33.718	1.000	15.09
ATOM	3098	CA	ASP	B	185	97.858	20.043	33.988	1.000	19.30
ATOM	3099	CB	ASP	B	185	97.691	18.914	32.979	1.000	22.62
ATOM	3100	CG	ASP	B	185	96.646	17.872	33.249	1.000	24.49
ATOM	3101	OD1	ASP	B	185	96.474	17.005	32.354	1.000	20.08
ATOM	3102	OD2	ASP	B	185	96.008	17.896	34.321	1.000	18.64
ATOM	3103	C	ASP	B	185	99.310	20.510	33.908	1.000	26.52
ATOM	3104	O	ASP	B	185	100.133	20.151	34.753	1.000	21.04
ATOM	3105	N	LEU	B	186	99.629	21.284	32.872	1.000	22.36
ATOM	3106	CA	LEU	B	186	101.027	21.590	32.551	1.000	23.22

ATOM	3107	CB	LEU	B	186	101.228	21.533	31.027	1.000	20.41
ATOM	3108	CG	LEU	B	186	100.941	20.172	30.391	1.000	22.94
ATOM	3109	CD1	LEU	B	186	101.144	20.239	28.878	1.000	21.64
ATOM	3110	CD2	LEU	B	186	101.818	19.106	31.038	1.000	17.63
ATOM	3111	C	LEU	B	186	101.481	22.946	33.058	1.000	22.22
ATOM	3112	O	LEU	B	186	102.652	23.319	32.973	1.000	25.41
ATOM	3113	N	ALA	B	187	100.555	23.729	33.595	1.000	13.92
ATOM	3114	CA	ALA	B	187	100.909	25.000	34.210	1.000	16.83
ATOM	3115	CB	ALA	B	187	99.648	25.573	34.846	1.000	17.97
ATOM	3116	C	ALA	B	187	102.045	24.894	35.219	1.000	23.80
ATOM	3117	O	ALA	B	187	102.964	25.737	35.187	1.000	21.12
ATOM	3118	N	PRO	B	188	102.088	23.933	36.134	1.000	25.14
ATOM	3119	CD	PRO	B	188	101.118	22.862	36.400	1.000	29.38
ATOM	3120	CA	PRO	B	188	103.226	23.871	37.065	1.000	28.38
ATOM	3121	CB	PRO	B	188	102.961	22.617	37.909	1.000	29.07
ATOM	3122	CG	PRO	B	188	101.522	22.300	37.721	1.000	30.89
ATOM	3123	C	PRO	B	188	104.566	23.693	36.364	1.000	33.56
ATOM	3124	O	PRO	B	188	105.626	23.900	36.966	1.000	28.73
ATOM	3125	N	ILE	B	189	104.572	23.295	35.085	1.000	27.67
ATOM	3126	CA	ILE	B	189	105.895	23.163	34.465	1.000	26.87
ATOM	3127	CB	ILE	B	189	106.105	21.739	33.932	1.000	30.74
ATOM	3128	CG2	ILE	B	189	106.222	20.759	35.101	1.000	36.88
ATOM	3129	CG1	ILE	B	189	105.044	21.259	32.943	1.000	26.76
ATOM	3130	CD1	ILE	B	189	105.239	19.805	32.560	1.000	31.10
ATOM	3131	C	ILE	B	189	106.098	24.202	33.378	1.000	23.49
ATOM	3132	O	ILE	B	189	107.081	24.145	32.640	1.000	26.22
ATOM	3133	N	GLY	B	190	105.204	25.185	33.267	1.000	18.26
ATOM	3134	CA	GLY	B	190	105.447	26.271	32.329	1.000	18.80
ATOM	3135	C	GLY	B	190	105.210	25.913	30.880	1.000	23.71
ATOM	3136	O	GLY	B	190	105.895	26.420	29.978	1.000	25.00
ATOM	3137	N	ILE	B	191	104.230	25.044	30.606	1.000	17.78
ATOM	3138	CA	ILE	B	191	103.883	24.834	29.190	1.000	20.17
ATOM	3139	CB	ILE	B	191	104.015	23.354	28.822	1.000	18.88
ATOM	3140	CG2	ILE	B	191	103.505	23.071	27.422	1.000	23.32
ATOM	3141	CG1	ILE	B	191	105.456	22.821	28.991	1.000	18.18
ATOM	3142	CD1	ILE	B	191	105.515	21.310	29.030	1.000	18.45
ATOM	3143	C	ILE	B	191	102.485	25.372	28.900	1.000	21.54
ATOM	3144	O	ILE	B	191	101.498	24.818	29.392	1.000	25.82
ATOM	3145	N	ARG	B	192	102.372	26.445	28.127	1.000	16.14
ATOM	3146	CA	ARG	B	192	101.081	27.041	27.803	1.000	19.05
ATOM	3147	CB	ARG	B	192	101.221	28.467	27.285	1.000	19.93
ATOM	3148	CG	ARG	B	192	101.763	29.513	28.236	1.000	19.68
ATOM	3149	CD	ARG	B	192	101.600	30.881	27.595	1.000	21.27
ATOM	3150	NE	ARG	B	192	102.670	31.168	26.636	1.000	22.16
ATOM	3151	CZ	ARG	B	192	102.485	31.544	25.382	1.000	22.96
ATOM	3152	NH1	ARG	B	192	101.256	31.674	24.895	1.000	19.21
ATOM	3153	NH2	ARG	B	192	103.537	31.784	24.605	1.000	21.25
ATOM	3154	C	ARG	B	192	100.361	26.239	26.723	1.000	19.37
ATOM	3155	O	ARG	B	192	101.027	25.680	25.848	1.000	24.14
ATOM	3156	N	VAL	B	193	99.040	26.191	26.788	1.000	20.05
ATOM	3157	CA	VAL	B	193	98.241	25.380	25.863	1.000	18.11
ATOM	3158	CB	VAL	B	193	97.685	24.114	26.518	1.000	20.36
ATOM	3159	CG1	VAL	B	193	96.889	23.250	25.545	1.000	20.35
ATOM	3160	CG2	VAL	B	193	98.814	23.273	27.113	1.000	16.91
ATOM	3161	C	VAL	B	193	97.127	26.267	25.310	1.000	23.22
ATOM	3162	O	VAL	B	193	96.324	26.809	26.074	1.000	16.71
ATOM	3163	N	MET	B	194	97.131	26.421	23.986	1.000	21.51
ATOM	3164	CA	MET	B	194	96.216	27.310	23.288	1.000	21.01
ATOM	3165	CB	MET	B	194	96.933	28.569	22.790	1.000	18.60
ATOM	3166	CG	MET	B	194	97.200	29.614	23.855	1.000	20.05
ATOM	3167	SD	MET	B	194	95.704	30.422	24.469	1.000	19.46

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ATOM   3168  CE  MET B 194      95.163  31.257  22.966 1.000 14.83
ATOM   3169  C   MET B 194      95.545  26.611  22.109 1.000 23.67
ATOM   3170  O   MET B 194      96.053  25.634  21.564 1.000 19.31
ATOM   3171  N   THR B 195      94.381  27.127  21.706 1.000 19.14
ATOM   3172  CA  THR B 195      93.691  26.481  20.590 1.000 21.41
ATOM   3173  CB  THR B 195      92.552  25.590  21.110 1.000 19.80
ATOM   3174  OG1 THR B 195      93.118  24.424  21.732 1.000 18.08
ATOM   3175  CG2 THR B 195      91.673  25.077  19.981 1.000 20.44
ATOM   3176  C   THR B 195      93.172  27.519  19.602 1.000 20.93
ATOM   3177  O   THR B 195      92.659  28.565  19.997 1.000 22.89
ATOM   3178  N   ILE B 196      93.323  27.219  18.311 1.000 24.23
ATOM   3179  CA  ILE B 196      92.772  28.060  17.250 1.000 21.67
ATOM   3180  CB  ILE B 196      93.815  28.433  16.185 1.000 18.92
ATOM   3181  CG2 ILE B 196      93.167  29.187  15.035 1.000 11.18
ATOM   3182  CG1 ILE B 196      94.987  29.235  16.746 1.000 18.01
ATOM   3183  CD1 ILE B 196      96.221  29.325  15.871 1.000 23.93
ATOM   3184  C   ILE B 196      91.592  27.321  16.617 1.000 19.12
ATOM   3185  O   ILE B 196      91.709  26.122  16.356 1.000 19.48
ATOM   3186  N   ALA B 197      90.492  28.028  16.405 1.000 17.65
ATOM   3187  CA  ALA B 197      89.319  27.474  15.742 1.000 20.33
ATOM   3188  CB  ALA B 197      88.076  27.676  16.602 1.000 15.84
ATOM   3189  C   ALA B 197      89.119  28.125  14.381 1.000 19.04
ATOM   3190  O   ALA B 197      88.425  29.142  14.277 1.000 22.10
ATOM   3191  N   PRO B 198      89.708  27.585  13.325 1.000 17.32
ATOM   3192  CD  PRO B 198      90.585  26.401  13.272 1.000 15.77
ATOM   3193  CA  PRO B 198      89.535  28.199  12.001 1.000 18.83
ATOM   3194  CB  PRO B 198      90.466  27.375  11.106 1.000 18.30
ATOM   3195  CG  PRO B 198      91.429  26.726  12.052 1.000 17.25
ATOM   3196  C   PRO B 198      88.105  28.088  11.492 1.000 17.88
ATOM   3197  O   PRO B 198      87.418  27.110  11.741 1.000 22.07
ATOM   3198  N   GLY B 199      87.624  29.084  10.753 1.000 17.24
ATOM   3199  CA  GLY B 199      86.354  28.939  10.047 1.000 21.59
ATOM   3200  C   GLY B 199      86.582  28.289   8.685 1.000 26.45
ATOM   3201  O   GLY B 199      86.803  27.077   8.621 1.000 32.80
ATOM   3202  N   LEU B 200      86.537  29.074   7.612 1.000 26.29
ATOM   3203  CA  LEU B 200      86.750  28.565   6.261 1.000 26.22
ATOM   3204  CB  LEU B 200      85.593  28.919   5.337 1.000 30.80
ATOM   3205  CG  LEU B 200      84.171  28.547   5.729 1.000 29.38
ATOM   3206  CD1 LEU B 200      83.196  29.355   4.884 1.000 21.97
ATOM   3207  CD2 LEU B 200      83.940  27.051   5.577 1.000 26.34
ATOM   3208  C   LEU B 200      88.034  29.129   5.645 1.000 21.47
ATOM   3209  O   LEU B 200      88.154  30.343   5.478 1.000 23.70
ATOM   3210  N   PHE B 201      88.964  28.244   5.316 1.000 17.48
ATOM   3211  CA  PHE B 201      90.280  28.647   4.858 1.000 20.96
ATOM   3212  CB  PHE B 201      91.342  28.233   5.887 1.000 20.51
ATOM   3213  CG  PHE B 201      91.619  29.319   6.910 1.000 22.85
ATOM   3214  CD1 PHE B 201      90.719  29.547   7.936 1.000 22.28
ATOM   3215  CD2 PHE B 201      92.768  30.090   6.833 1.000 20.32
ATOM   3216  CE1 PHE B 201      90.969  30.543   8.869 1.000 21.15
ATOM   3217  CE2 PHE B 201      93.020  31.086   7.758 1.000 20.28
ATOM   3218  CZ  PHE B 201      92.121  31.308   8.785 1.000 20.28
ATOM   3219  C   PHE B 201      90.646  28.017   3.521 1.000 25.00
ATOM   3220  O   PHE B 201      90.280  26.880   3.226 1.000 24.24
ATOM   3221  N   GLY B 202      91.389  28.781   2.726 1.000 28.46
ATOM   3222  CA  GLY B 202      91.796  28.281   1.426 1.000 27.60
ATOM   3223  C   GLY B 202      92.971  27.335   1.519 1.000 26.65
ATOM   3224  O   GLY B 202      94.051  27.658   1.027 1.000 32.79
ATOM   3225  N   THR B 203      92.793  26.160   2.102 1.000 24.28
ATOM   3226  CA  THR B 203      93.793  25.097   1.999 1.000 26.69
ATOM   3227  CB  THR B 203      93.965  24.347   3.324 1.000 27.45
ATOM   3228  OG1 THR B 203      92.784  23.550   3.515 1.000 25.36
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ATOM   3229  CG2 THR B 203      94.091  25.273   4.518 1.000 28.01
ATOM   3230  C   THR B 203      93.324  24.131   0.918 1.000 28.64
ATOM   3231  O   THR B 203      92.175  24.359   0.486 1.000 30.62
ATOM   3232  N   PRO B 204      94.072  23.142   0.466 1.000 28.39
ATOM   3233  CD  PRO B 204      95.462  22.820   0.828 1.000 28.87
ATOM   3234  CA  PRO B 204      93.578  22.220  -0.571 1.000 30.63
ATOM   3235  CB  PRO B 204      94.591  21.068  -0.536 1.000 27.82
ATOM   3236  CG  PRO B 204      95.859  21.748  -0.140 1.000 27.77
ATOM   3237  C   PRO B 204      92.181  21.679  -0.294 1.000 38.86
ATOM   3238  O   PRO B 204      91.429  21.401  -1.232 1.000 34.56
ATOM   3239  N   LEU B 205      91.836  21.548   0.983 1.000 39.43
ATOM   3240  CA  LEU B 205      90.506  21.139   1.411 1.000 33.83
ATOM   3241  CB  LEU B 205      90.451  21.293   2.926 1.000 32.03
ATOM   3242  CG  LEU B 205      89.410  20.595   3.776 1.000 36.51
ATOM   3243  CD1 LEU B 205      88.999  19.229   3.260 1.000 34.60
ATOM   3244  CD2 LEU B 205      89.964  20.456   5.203 1.000 33.53
ATOM   3245  C   LEU B 205      89.426  21.950   0.723 1.000 28.71
ATOM   3246  O   LEU B 205      88.378  21.423   0.342 1.000 37.20
ATOM   3247  N   LEU B 206      89.636  23.251   0.513 1.000 25.71
ATOM   3248  CA  LEU B 206      88.591  24.054  -0.118 1.000 30.76
ATOM   3249  CB  LEU B 206      88.240  25.255   0.766 1.000 36.14
ATOM   3250  CG  LEU B 206      88.103  24.958   2.263 1.000 40.37
ATOM   3251  CD1 LEU B 206      87.571  26.179   2.997 1.000 60.97
ATOM   3252  CD2 LEU B 206      87.208  23.751   2.492 1.000 33.96
ATOM   3253  C   LEU B 206      88.986  24.558  -1.501 1.000 40.20
ATOM   3254  O   LEU B 206      88.165  24.616  -2.423 1.000 30.96
ATOM   3255  N   THR B 207      90.254  24.941  -1.661 1.000 31.29
ATOM   3256  CA  THR B 207      90.678  25.454  -2.963 1.000 39.95
ATOM   3257  CB  THR B 207      92.132  25.965  -2.884 1.000 42.48
ATOM   3258  OG1 THR B 207      92.958  24.995  -2.219 1.000 36.55
ATOM   3259  CG2 THR B 207      92.184  27.251  -2.065 1.000 34.71
ATOM   3260  C   THR B 207      90.537  24.416  -4.073 1.000 39.41
ATOM   3261  O   THR B 207      90.485  24.780  -5.256 1.000 44.36
ATOM   3262  N   SER B 208      90.475  23.130  -3.721 1.000 28.72
ATOM   3263  CA  SER B 208      90.370  22.082  -4.739 1.000 33.20
ATOM   3264  CB  SER B 208      91.057  20.795  -4.288 1.000 33.20
ATOM   3265  OG  SER B 208      90.464  20.257  -3.124 1.000 33.13
ATOM   3266  C   SER B 208      88.912  21.814  -5.098 1.000 42.89
ATOM   3267  O   SER B 208      88.575  20.862  -5.803 1.000 45.91
ATOM   3268  N   LEU B 209      88.031  22.681  -4.603 1.000 38.04
ATOM   3269  CA  LEU B 209      86.621  22.583  -4.940 1.000 35.13
ATOM   3270  CB  LEU B 209      85.756  23.031  -3.768 1.000 39.19
ATOM   3271  CG  LEU B 209      85.885  22.257  -2.457 1.000 55.29
ATOM   3272  CD1 LEU B 209      85.627  23.172  -1.267 1.000 60.85
ATOM   3273  CD2 LEU B 209      84.932  21.066  -2.428 1.000 57.75
ATOM   3274  C   LEU B 209      86.311  23.435  -6.170 1.000 37.91
ATOM   3275  O   LEU B 209      87.022  24.396  -6.475 1.000 30.12
ATOM   3276  N   PRO B 210      85.231  23.068  -6.853 1.000 34.73
ATOM   3277  CD  PRO B 210      84.373  21.918  -6.548 1.000 34.46
ATOM   3278  CA  PRO B 210      84.778  23.819  -8.026 1.000 38.34
ATOM   3279  CB  PRO B 210      83.398  23.230  -8.306 1.000 41.74
ATOM   3280  CG  PRO B 210      83.425  21.867  -7.706 1.000 41.21
ATOM   3281  C   PRO B 210      84.651  25.310  -7.725 1.000 38.15
ATOM   3282  O   PRO B 210      84.266  25.712  -6.627 1.000 41.50
ATOM   3283  N   GLU B 211      84.980  26.128  -8.717 1.000 32.53
ATOM   3284  CA  GLU B 211      84.981  27.576  -8.561 1.000 31.26
ATOM   3285  CB  GLU B 211      85.370  28.233  -9.891 1.000 35.90
ATOM   3286  CG  GLU B 211      84.870  29.659 -10.046 1.000 43.23
ATOM   3287  CD  GLU B 211      85.279  30.303 -11.356 1.000 51.95
ATOM   3288  OE1 GLU B 211      85.853  31.414 -11.323 1.000 62.26
ATOM   3289  OE2 GLU B 211      85.029  29.704 -12.425 1.000 53.28
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ATOM	3290	C	GLU	B	211	83.642	28.099	-8.061	1.000	32.27
ATOM	3291	O	GLU	B	211	83.581	28.997	-7.213	1.000	21.03
ATOM	3292	N	LYS	B	212	82.529	27.569	-8.563	1.000	32.31
ATOM	3293	CA	LYS	B	212	81.243	28.070	-8.071	1.000	38.47
ATOM	3294	CB	LYS	B	212	80.068	27.458	-8.811	1.000	29.32
ATOM	3295	C	LYS	B	212	81.148	27.788	-6.577	1.000	43.86
ATOM	3296	O	LYS	B	212	80.668	28.602	-5.789	1.000	54.98
ATOM	3297	N	VAL	B	213	81.625	26.598	-6.191	1.000	38.14
ATOM	3298	CA	VAL	B	213	81.567	26.297	-4.759	1.000	35.85
ATOM	3299	CB	VAL	B	213	81.926	24.835	-4.467	1.000	38.37
ATOM	3300	CG1	VAL	B	213	81.931	24.560	-2.970	1.000	31.23
ATOM	3301	CG2	VAL	B	213	80.936	23.914	-5.173	1.000	41.89
ATOM	3302	C	VAL	B	213	82.476	27.256	-3.998	1.000	31.46
ATOM	3303	O	VAL	B	213	82.070	27.793	-2.972	1.000	37.88
ATOM	3304	N	ARG	B	214	83.691	27.495	-4.475	1.000	37.75
ATOM	3305	CA	ARG	B	214	84.587	28.420	-3.777	1.000	41.19
ATOM	3306	CB	ARG	B	214	85.934	28.529	-4.503	1.000	39.36
ATOM	3307	CG	ARG	B	214	86.647	27.190	-4.626	1.000	43.05
ATOM	3308	CD	ARG	B	214	88.093	27.320	-5.068	1.000	40.23
ATOM	3309	NE	ARG	B	214	88.247	28.114	-6.277	1.000	35.00
ATOM	3310	CZ	ARG	B	214	88.345	27.639	-7.512	1.000	39.48
ATOM	3311	NH1	ARG	B	214	88.308	26.332	-7.732	1.000	33.49
ATOM	3312	NH2	ARG	B	214	88.481	28.477	-8.536	1.000	38.43
ATOM	3313	C	ARG	B	214	83.922	29.783	-3.624	1.000	33.34
ATOM	3314	O	ARG	B	214	83.863	30.355	-2.532	1.000	33.42
ATOM	3315	N	ASN	B	215	83.400	30.309	-4.724	1.000	29.46
ATOM	3316	CA	ASN	B	215	82.698	31.589	-4.675	1.000	24.27
ATOM	3317	CB	ASN	B	215	82.091	31.913	-6.036	1.000	27.96
ATOM	3318	CG	ASN	B	215	83.116	32.178	-7.116	1.000	49.03
ATOM	3319	OD1	ASN	B	215	84.318	32.249	-6.853	1.000	61.54
ATOM	3320	ND2	ASN	B	215	82.628	32.326	-8.347	1.000	66.34
ATOM	3321	C	ASN	B	215	81.589	31.563	-3.630	1.000	31.46
ATOM	3322	O	ASN	B	215	81.385	32.518	-2.888	1.000	40.57
ATOM	3323	N	PHE	B	216	80.846	30.457	-3.584	1.000	33.81
ATOM	3324	CA	PHE	B	216	79.719	30.371	-2.665	1.000	34.18
ATOM	3325	CB	PHE	B	216	78.916	29.090	-2.910	1.000	32.53
ATOM	3326	CG	PHE	B	216	77.792	28.911	-1.898	1.000	37.68
ATOM	3327	CD1	PHE	B	216	76.862	29.916	-1.702	1.000	44.84
ATOM	3328	CD2	PHE	B	216	77.680	27.755	-1.153	1.000	45.52
ATOM	3329	CE1	PHE	B	216	75.839	29.772	-0.783	1.000	46.68
ATOM	3330	CE2	PHE	B	216	76.661	27.599	-0.233	1.000	47.17
ATOM	3331	CZ	PHE	B	216	75.736	28.610	-0.042	1.000	46.55
ATOM	3332	C	PHE	B	216	80.187	30.427	-1.211	1.000	39.70
ATOM	3333	O	PHE	B	216	79.620	31.156	-0.394	1.000	35.84
ATOM	3334	N	LEU	B	217	81.219	29.643	-0.911	1.000	36.33
ATOM	3335	CA	LEU	B	217	81.780	29.551	0.430	1.000	30.36
ATOM	3336	CB	LEU	B	217	82.852	28.461	0.506	1.000	32.88
ATOM	3337	CG	LEU	B	217	82.298	27.035	0.611	1.000	36.90
ATOM	3338	CD1	LEU	B	217	83.363	25.994	0.305	1.000	43.23
ATOM	3339	CD2	LEU	B	217	81.693	26.802	1.991	1.000	30.83
ATOM	3340	C	LEU	B	217	82.332	30.902	0.861	1.000	28.07
ATOM	3341	O	LEU	B	217	82.036	31.352	1.966	1.000	26.98
ATOM	3342	N	ALA	B	218	83.107	31.532	-0.015	1.000	27.69
ATOM	3343	CA	ALA	B	218	83.615	32.869	0.265	1.000	35.60
ATOM	3344	CB	ALA	B	218	84.459	33.400	-0.887	1.000	31.53
ATOM	3345	C	ALA	B	218	82.466	33.831	0.527	1.000	35.67
ATOM	3346	O	ALA	B	218	82.521	34.677	1.416	1.000	30.41
ATOM	3347	N	SER	B	219	81.411	33.689	-0.277	1.000	35.07
ATOM	3348	CA	SER	B	219	80.254	34.560	-0.141	1.000	30.23
ATOM	3349	CB	SER	B	219	79.165	34.183	-1.152	1.000	26.14
ATOM	3350	OG	SER	B	219	78.405	33.091	-0.657	1.000	24.81

ATOM	3351	C	SER	B	219	79.634	34.508	1.252	1.000	26.91
ATOM	3352	O	SER	B	219	78.893	35.438	1.574	1.000	40.31
ATOM	3353	N	GLN	B	220	79.901	33.478	2.037	1.000	29.34
ATOM	3354	CA	GLN	B	220	79.337	33.292	3.370	1.000	29.90
ATOM	3355	CB	GLN	B	220	79.274	31.810	3.738	1.000	36.32
ATOM	3356	CG	GLN	B	220	78.756	30.911	2.625	1.000	48.32
ATOM	3357	CD	GLN	B	220	77.429	30.306	3.022	1.000	54.56
ATOM	3358	OE1	GLN	B	220	76.375	30.908	2.830	1.000	67.54
ATOM	3359	NE2	GLN	B	220	77.491	29.095	3.572	1.000	56.82
ATOM	3360	C	GLN	B	220	80.138	33.992	4.470	1.000	30.30
ATOM	3361	O	GLN	B	220	79.662	34.133	5.605	1.000	23.80
ATOM	3362	N	VAL	B	221	81.375	34.404	4.181	1.000	25.59
ATOM	3363	CA	VAL	B	221	82.170	35.013	5.253	1.000	21.11
ATOM	3364	CB	VAL	B	221	83.683	34.827	5.056	1.000	18.83
ATOM	3365	CG1	VAL	B	221	84.403	35.365	6.287	1.000	14.24
ATOM	3366	CG2	VAL	B	221	84.034	33.366	4.799	1.000	14.24
ATOM	3367	C	VAL	B	221	81.826	36.492	5.318	1.000	24.34
ATOM	3368	O	VAL	B	221	81.981	37.173	4.296	1.000	26.30
ATOM	3369	N	PRO	B	222	81.353	37.005	6.445	1.000	23.91
ATOM	3370	CD	PRO	B	222	81.160	36.335	7.743	1.000	24.90
ATOM	3371	CA	PRO	B	222	80.914	38.407	6.479	1.000	21.55
ATOM	3372	CB	PRO	B	222	80.489	38.615	7.940	1.000	19.51
ATOM	3373	CG	PRO	B	222	80.127	37.233	8.396	1.000	21.27
ATOM	3374	C	PRO	B	222	81.999	39.392	6.085	1.000	26.91
ATOM	3375	O	PRO	B	222	81.791	40.209	5.179	1.000	24.96
ATOM	3376	N	PHE	B	223	83.167	39.377	6.731	1.000	24.34
ATOM	3377	CA	PHE	B	223	84.216	40.284	6.262	1.000	23.07
ATOM	3378	CB	PHE	B	223	83.936	41.746	6.649	1.000	21.27
ATOM	3379	CG	PHE	B	223	85.084	42.637	6.178	1.000	24.70
ATOM	3380	CD1	PHE	B	223	85.177	42.994	4.842	1.000	29.09
ATOM	3381	CD2	PHE	B	223	86.053	43.094	7.051	1.000	22.56
ATOM	3382	CE1	PHE	B	223	86.224	43.781	4.379	1.000	25.41
ATOM	3383	CE2	PHE	B	223	87.105	43.869	6.597	1.000	25.23
ATOM	3384	CZ	PHE	B	223	87.200	44.214	5.258	1.000	21.68
ATOM	3385	C	PHE	B	223	85.586	39.845	6.784	1.000	27.57
ATOM	3386	O	PHE	B	223	85.715	39.631	7.997	1.000	23.91
ATOM	3387	N	PRO	B	224	86.599	39.735	5.933	1.000	28.05
ATOM	3388	CD	PRO	B	224	87.984	39.411	6.329	1.000	29.64
ATOM	3389	CA	PRO	B	224	86.504	39.941	4.483	1.000	28.44
ATOM	3390	CB	PRO	B	224	87.959	40.006	4.022	1.000	30.61
ATOM	3391	CG	PRO	B	224	88.696	39.180	5.019	1.000	27.95
ATOM	3392	C	PRO	B	224	85.800	38.774	3.803	1.000	25.89
ATOM	3393	O	PRO	B	224	85.878	37.651	4.292	1.000	23.18
ATOM	3394	N	SER	B	225	85.094	39.059	2.716	1.000	26.20
ATOM	3395	CA	SER	B	225	84.219	38.049	2.125	1.000	28.41
ATOM	3396	CB	SER	B	225	83.066	38.708	1.367	1.000	37.56
ATOM	3397	OG	SER	B	225	82.385	39.622	2.211	1.000	54.93
ATOM	3398	C	SER	B	225	85.006	37.117	1.215	1.000	28.63
ATOM	3399	O	SER	B	225	84.844	37.124	-0.003	1.000	28.75
ATOM	3400	N	ARG	B	226	85.858	36.310	1.832	1.000	22.36
ATOM	3401	CA	ARG	B	226	86.687	35.359	1.115	1.000	22.82
ATOM	3402	CB	ARG	B	226	87.892	36.056	0.470	1.000	18.79
ATOM	3403	CG	ARG	B	226	88.677	36.899	1.473	1.000	21.54
ATOM	3404	CD	ARG	B	226	90.176	36.733	1.316	1.000	25.20
ATOM	3405	NE	ARG	B	226	90.922	37.696	2.120	1.000	23.19
ATOM	3406	CZ	ARG	B	226	91.575	37.367	3.226	1.000	25.07
ATOM	3407	NH1	ARG	B	226	92.224	38.304	3.893	1.000	19.90
ATOM	3408	NH2	ARG	B	226	91.576	36.114	3.651	1.000	23.08
ATOM	3409	C	ARG	B	226	87.181	34.273	2.064	1.000	26.25
ATOM	3410	O	ARG	B	226	87.133	34.410	3.288	1.000	24.82
ATOM	3411	N	LEU	B	227	87.670	33.187	1.479	1.000	21.51

ATOM	3412	CA	LEU	B	227	88.281	32.148	2.305	1.000	25.72
ATOM	3413	CB	LEU	B	227	88.685	30.973	1.412	1.000	25.48
ATOM	3414	CG	LEU	B	227	87.517	30.370	0.608	1.000	26.39
ATOM	3415	CD1	LEU	B	227	88.031	29.371	-0.415	1.000	23.44
ATOM	3416	CD2	LEU	B	227	86.495	29.736	1.543	1.000	18.43
ATOM	3417	C	LEU	B	227	89.453	32.727	3.074	1.000	24.64
ATOM	3418	O	LEU	B	227	90.092	33.694	2.658	1.000	18.08
ATOM	3419	N	GLY	B	228	89.760	32.167	4.249	1.000	26.03
ATOM	3420	CA	GLY	B	228	90.925	32.693	4.964	1.000	22.23
ATOM	3421	C	GLY	B	228	92.209	32.285	4.257	1.000	20.68
ATOM	3422	O	GLY	B	228	92.244	31.206	3.651	1.000	22.79
ATOM	3423	N	ASP	B	229	93.247	33.113	4.332	1.000	20.55
ATOM	3424	CA	ASP	B	229	94.548	32.733	3.763	1.000	20.20
ATOM	3425	CB	ASP	B	229	95.305	33.966	3.311	1.000	26.22
ATOM	3426	CG	ASP	B	229	96.686	33.727	2.742	1.000	37.78
ATOM	3427	OD1	ASP	B	229	97.180	34.649	2.055	1.000	50.30
ATOM	3428	OD2	ASP	B	229	97.311	32.665	2.942	1.000	36.38
ATOM	3429	C	ASP	B	229	95.351	31.964	4.809	1.000	18.70
ATOM	3430	O	ASP	B	229	95.515	32.497	5.906	1.000	22.47
ATOM	3431	N	PRO	B	230	95.839	30.776	4.487	1.000	24.85
ATOM	3432	CD	PRO	B	230	95.682	30.076	3.196	1.000	25.08
ATOM	3433	CA	PRO	B	230	96.623	29.975	5.441	1.000	24.33
ATOM	3434	CB	PRO	B	230	97.245	28.898	4.543	1.000	26.36
ATOM	3435	CG	PRO	B	230	96.196	28.690	3.488	1.000	25.22
ATOM	3436	C	PRO	B	230	97.701	30.776	6.156	1.000	26.10
ATOM	3437	O	PRO	B	230	98.023	30.510	7.317	1.000	24.78
ATOM	3438	N	ALA	B	231	98.263	31.777	5.487	1.000	25.30
ATOM	3439	CA	ALA	B	231	99.260	32.641	6.098	1.000	24.99
ATOM	3440	CB	ALA	B	231	99.850	33.597	5.081	1.000	21.53
ATOM	3441	C	ALA	B	231	98.650	33.423	7.260	1.000	27.72
ATOM	3442	O	ALA	B	231	99.380	33.872	8.142	1.000	23.63
ATOM	3443	N	GLU	B	232	97.326	33.586	7.249	1.000	23.39
ATOM	3444	CA	GLU	B	232	96.690	34.297	8.370	1.000	24.37
ATOM	3445	CB	GLU	B	232	95.313	34.829	7.971	1.000	24.04
ATOM	3446	CG	GLU	B	232	95.399	35.976	6.963	1.000	22.30
ATOM	3447	CD	GLU	B	232	94.083	36.265	6.268	1.000	19.98
ATOM	3448	OE1	GLU	B	232	93.333	35.320	5.959	1.000	17.23
ATOM	3449	OE2	GLU	B	232	93.790	37.451	6.032	1.000	22.71
ATOM	3450	C	GLU	B	232	96.619	33.387	9.586	1.000	20.32
ATOM	3451	O	GLU	B	232	96.791	33.821	10.728	1.000	23.31
ATOM	3452	N	TYR	B	233	96.394	32.097	9.369	1.000	17.51
ATOM	3453	CA	TYR	B	233	96.485	31.156	10.490	1.000	20.79
ATOM	3454	CB	TYR	B	233	96.161	29.733	10.043	1.000	18.94
ATOM	3455	CG	TYR	B	233	96.350	28.654	11.076	1.000	19.81
ATOM	3456	CD1	TYR	B	233	95.289	28.296	11.907	1.000	20.70
ATOM	3457	CE1	TYR	B	233	95.437	27.303	12.862	1.000	18.77
ATOM	3458	CD2	TYR	B	233	97.546	27.974	11.245	1.000	17.63
ATOM	3459	CE2	TYR	B	233	97.712	26.992	12.194	1.000	22.14
ATOM	3460	CZ	TYR	B	233	96.648	26.658	13.007	1.000	22.85
ATOM	3461	OH	TYR	B	233	96.811	25.672	13.953	1.000	22.40
ATOM	3462	C	TYR	B	233	97.889	31.236	11.094	1.000	29.44
ATOM	3463	O	TYR	B	233	98.077	31.335	12.308	1.000	25.44
ATOM	3464	N	ALA	B	234	98.883	31.168	10.212	1.000	21.62
ATOM	3465	CA	ALA	B	234	100.282	31.201	10.623	1.000	20.02
ATOM	3466	CB	ALA	B	234	101.188	31.127	9.400	1.000	24.84
ATOM	3467	C	ALA	B	234	100.594	32.446	11.440	1.000	17.92
ATOM	3468	O	ALA	B	234	101.231	32.346	12.492	1.000	25.05
ATOM	3469	N	HIS	B	235	100.159	33.611	10.977	1.000	17.22
ATOM	3470	CA	HIS	B	235	100.336	34.841	11.739	1.000	18.97
ATOM	3471	CB	HIS	B	235	99.660	36.020	11.045	1.000	17.03
ATOM	3472	CG	HIS	B	235	99.589	37.276	11.854	1.000	21.49

ATOM	3473	CD2	HIS	B	235	98.703	37.758	12.765	1.000	22.09
ATOM	3474	ND1	HIS	B	235	100.566	38.248	11.751	1.000	26.88
ATOM	3475	CE1	HIS	B	235	100.286	39.259	12.561	1.000	24.36
ATOM	3476	NE2	HIS	B	235	99.153	38.983	13.195	1.000	25.35
ATOM	3477	C	HIS	B	235	99.768	34.673	13.150	1.000	24.20
ATOM	3478	O	HIS	B	235	100.338	35.162	14.127	1.000	20.64
ATOM	3479	N	LEU	B	236	98.622	33.999	13.272	1.000	24.19
ATOM	3480	CA	LEU	B	236	98.023	33.863	14.602	1.000	22.43
ATOM	3481	CB	LEU	B	236	96.560	33.416	14.532	1.000	17.42
ATOM	3482	CG	LEU	B	236	95.880	33.237	15.902	1.000	16.92
ATOM	3483	CD1	LEU	B	236	96.023	34.506	16.729	1.000	16.92
ATOM	3484	CD2	LEU	B	236	94.422	32.851	15.744	1.000	16.70
ATOM	3485	C	LEU	B	236	98.846	32.903	15.456	1.000	21.64
ATOM	3486	O	LEU	B	236	99.001	33.128	16.659	1.000	20.22
ATOM	3487	N	VAL	B	237	99.376	31.834	14.868	1.000	19.99
ATOM	3488	CA	VAL	B	237	100.251	30.929	15.608	1.000	18.28
ATOM	3489	CB	VAL	B	237	100.792	29.795	14.727	1.000	25.11
ATOM	3490	CG1	VAL	B	237	101.981	29.110	15.395	1.000	23.91
ATOM	3491	CG2	VAL	B	237	99.705	28.775	14.415	1.000	18.18
ATOM	3492	C	VAL	B	237	101.415	31.721	16.194	1.000	24.84
ATOM	3493	O	VAL	B	237	101.774	31.589	17.369	1.000	24.82
ATOM	3494	N	GLN	B	238	102.015	32.578	15.361	1.000	20.39
ATOM	3495	CA	GLN	B	238	103.134	33.377	15.837	1.000	21.98
ATOM	3496	CB	GLN	B	238	103.718	34.217	14.695	1.000	26.47
ATOM	3497	CG	GLN	B	238	104.840	35.137	15.173	1.000	33.86
ATOM	3498	CD	GLN	B	238	105.728	35.611	14.040	1.000	45.57
ATOM	3499	OE1	GLN	B	238	105.410	35.440	12.861	1.000	45.00
ATOM	3500	NE2	GLN	B	238	106.855	36.220	14.396	1.000	42.07
ATOM	3501	C	GLN	B	238	102.749	34.305	16.984	1.000	22.31
ATOM	3502	O	GLN	B	238	103.498	34.472	17.950	1.000	26.79
ATOM	3503	N	ALA	B	239	101.576	34.930	16.875	1.000	18.16
ATOM	3504	CA	ALA	B	239	101.135	35.872	17.902	1.000	18.40
ATOM	3505	CB	ALA	B	239	99.819	36.533	17.511	1.000	20.73
ATOM	3506	C	ALA	B	239	101.018	35.158	19.250	1.000	20.71
ATOM	3507	O	ALA	B	239	101.457	35.685	20.265	1.000	23.16
ATOM	3508	N	ILE	B	240	100.450	33.961	19.235	1.000	20.05
ATOM	3509	CA	ILE	B	240	100.289	33.138	20.426	1.000	25.35
ATOM	3510	CB	ILE	B	240	99.418	31.904	20.136	1.000	21.83
ATOM	3511	CG2	ILE	B	240	99.470	30.903	21.280	1.000	19.47
ATOM	3512	CG1	ILE	B	240	97.958	32.221	19.798	1.000	15.52
ATOM	3513	CD1	ILE	B	240	97.238	31.016	19.220	1.000	15.32
ATOM	3514	C	ILE	B	240	101.643	32.700	20.974	1.000	28.29
ATOM	3515	O	ILE	B	240	101.861	32.715	22.190	1.000	23.76
ATOM	3516	N	ILE	B	241	102.565	32.318	20.090	1.000	22.50
ATOM	3517	CA	ILE	B	241	103.911	31.983	20.553	1.000	25.40
ATOM	3518	CB	ILE	B	241	104.840	31.538	19.407	1.000	27.14
ATOM	3519	CG2	ILE	B	241	106.289	31.468	19.869	1.000	20.81
ATOM	3520	CG1	ILE	B	241	104.452	30.211	18.738	1.000	21.73
ATOM	3521	CD1	ILE	B	241	105.073	30.067	17.356	1.000	19.24
ATOM	3522	C	ILE	B	241	104.525	33.188	21.253	1.000	23.95
ATOM	3523	O	ILE	B	241	105.177	33.056	22.288	1.000	22.10
ATOM	3524	N	GLU	B	242	104.325	34.378	20.686	1.000	19.53
ATOM	3525	CA	GLU	B	242	105.016	35.554	21.188	1.000	20.82
ATOM	3526	CB	GLU	B	242	105.098	36.638	20.117	1.000	22.01
ATOM	3527	CG	GLU	B	242	105.898	36.269	18.878	1.000	25.93
ATOM	3528	CD	GLU	B	242	105.964	37.432	17.897	1.000	30.65
ATOM	3529	OE1	GLU	B	242	106.791	37.382	16.965	1.000	39.62
ATOM	3530	OE2	GLU	B	242	105.192	38.405	18.052	1.000	35.25
ATOM	3531	C	GLU	B	242	104.368	36.145	22.437	1.000	27.37
ATOM	3532	O	GLU	B	242	105.070	36.770	23.241	1.000	24.53
ATOM	3533	N	ASN	B	243	103.064	35.975	22.607	1.000	22.12

ATOM	3534	CA	ASN	B	243	102.369	36.569	23.748	1.000	26.24
ATOM	3535	CB	ASN	B	243	100.916	36.907	23.391	1.000	21.07
ATOM	3536	CG	ASN	B	243	100.332	37.907	24.370	1.000	22.04
ATOM	3537	OD1	ASN	B	243	100.327	37.675	25.580	1.000	22.80
ATOM	3538	ND2	ASN	B	243	99.843	39.030	23.849	1.000	21.75
ATOM	3539	C	ASN	B	243	102.403	35.645	24.959	1.000	23.87
ATOM	3540	O	ASN	B	243	101.770	34.588	24.967	1.000	25.67
ATOM	3541	N	PRO	B	244	103.160	36.009	25.986	1.000	23.78
ATOM	3542	CD	PRO	B	244	103.897	37.274	26.156	1.000	22.06
ATOM	3543	CA	PRO	B	244	103.350	35.103	27.127	1.000	23.04
ATOM	3544	CB	PRO	B	244	104.415	35.814	27.969	1.000	22.47
ATOM	3545	CG	PRO	B	244	105.017	36.844	27.078	1.000	23.63
ATOM	3546	C	PRO	B	244	102.099	34.888	27.964	1.000	20.27
ATOM	3547	O	PRO	B	244	102.063	33.958	28.774	1.000	23.10
ATOM	3548	N	PHE	B	245	101.068	35.717	27.816	1.000	24.09
ATOM	3549	CA	PHE	B	245	99.922	35.612	28.728	1.000	19.94
ATOM	3550	CB	PHE	B	245	99.530	37.003	29.232	1.000	24.39
ATOM	3551	CG	PHE	B	245	99.015	37.049	30.670	1.000	21.73
ATOM	3552	CD1	PHE	B	245	97.758	37.569	30.956	1.000	17.78
ATOM	3553	CD2	PHE	B	245	99.799	36.577	31.708	1.000	17.75
ATOM	3554	CE1	PHE	B	245	97.290	37.617	32.257	1.000	20.49
ATOM	3555	CE2	PHE	B	245	99.324	36.619	33.017	1.000	20.79
ATOM	3556	CZ	PHE	B	245	98.067	37.132	33.302	1.000	17.74
ATOM	3557	C	PHE	B	245	98.725	34.925	28.084	1.000	27.35
ATOM	3558	O	PHE	B	245	97.675	34.806	28.736	1.000	19.89
ATOM	3559	N	LEU	B	246	98.842	34.471	26.832	1.000	22.36
ATOM	3560	CA	LEU	B	246	97.762	33.710	26.212	1.000	17.89
ATOM	3561	CB	LEU	B	246	97.784	33.848	24.686	1.000	22.68
ATOM	3562	CG	LEU	B	246	97.091	35.100	24.133	1.000	25.09
ATOM	3563	CD1	LEU	B	246	97.472	35.302	22.675	1.000	23.65
ATOM	3564	CD2	LEU	B	246	95.578	35.009	24.322	1.000	20.52
ATOM	3565	C	LEU	B	246	97.844	32.238	26.587	1.000	23.42
ATOM	3566	O	LEU	B	246	98.768	31.511	26.212	1.000	22.20
ATOM	3567	N	ASN	B	247	96.845	31.782	27.351	1.000	21.98
ATOM	3568	CA	ASN	B	247	96.882	30.399	27.809	1.000	21.01
ATOM	3569	CB	ASN	B	247	97.787	30.310	29.039	1.000	21.94
ATOM	3570	CG	ASN	B	247	98.210	28.908	29.411	1.000	25.84
ATOM	3571	OD1	ASN	B	247	98.028	27.941	28.675	1.000	17.45
ATOM	3572	ND2	ASN	B	247	98.792	28.782	30.606	1.000	23.37
ATOM	3573	C	ASN	B	247	95.483	29.883	28.121	1.000	21.43
ATOM	3574	O	ASN	B	247	94.652	30.609	28.676	1.000	19.82
ATOM	3575	N	GLY	B	248	95.237	28.628	27.766	1.000	19.48
ATOM	3576	CA	GLY	B	248	94.013	27.950	28.126	1.000	19.31
ATOM	3577	C	GLY	B	248	92.796	28.438	27.373	1.000	22.31
ATOM	3578	O	GLY	B	248	91.663	28.233	27.819	1.000	17.54
ATOM	3579	N	GLU	B	249	93.031	29.070	26.231	1.000	17.27
ATOM	3580	CA	GLU	B	249	91.945	29.718	25.494	1.000	16.46
ATOM	3581	CB	GLU	B	249	92.194	31.218	25.514	1.000	14.25
ATOM	3582	CG	GLU	B	249	91.391	32.096	24.591	1.000	19.57
ATOM	3583	CD	GLU	B	249	89.904	32.186	24.864	1.000	21.27
ATOM	3584	OE1	GLU	B	249	89.338	33.286	24.699	1.000	24.41
ATOM	3585	OE2	GLU	B	249	89.280	31.165	25.211	1.000	21.97
ATOM	3586	C	GLU	B	249	91.828	29.176	24.072	1.000	24.78
ATOM	3587	O	GLU	B	249	92.772	28.582	23.534	1.000	19.55
ATOM	3588	N	VAL	B	250	90.648	29.371	23.494	1.000	21.56
ATOM	3589	CA	VAL	B	250	90.339	29.004	22.114	1.000	12.85
ATOM	3590	CB	VAL	B	250	89.143	28.047	22.038	1.000	23.39
ATOM	3591	CG1	VAL	B	250	88.826	27.692	20.594	1.000	22.07
ATOM	3592	CG2	VAL	B	250	89.418	26.790	22.860	1.000	21.03
ATOM	3593	C	VAL	B	250	90.048	30.275	21.326	1.000	19.79
ATOM	3594	O	VAL	B	250	89.234	31.088	21.776	1.000	18.20

ATOM	3595	N	ILE	B	251	90.692	30.490	20.180	1.000	16.00
ATOM	3596	CA	ILE	B	251	90.482	31.725	19.431	1.000	17.61
ATOM	3597	CB	ILE	B	251	91.816	32.468	19.247	1.000	20.13
ATOM	3598	CG2	ILE	B	251	91.679	33.615	18.256	1.000	19.21
ATOM	3599	CG1	ILE	B	251	92.413	32.951	20.572	1.000	19.68
ATOM	3600	CD1	ILE	B	251	93.807	33.526	20.465	1.000	18.52
ATOM	3601	C	ILE	B	251	89.866	31.466	18.061	1.000	20.08
ATOM	3602	O	ILE	B	251	90.456	30.740	17.256	1.000	23.04
ATOM	3603	N	ARG	B	252	88.699	32.046	17.802	1.000	21.13
ATOM	3604	CA	ARG	B	252	88.045	31.910	16.506	1.000	20.87
ATOM	3605	CB	ARG	B	252	86.572	32.316	16.551	1.000	19.90
ATOM	3606	CG	ARG	B	252	85.652	31.342	17.277	1.000	22.38
ATOM	3607	CD	ARG	B	252	84.222	31.909	17.273	1.000	23.90
ATOM	3608	NE	ARG	B	252	83.591	31.572	15.999	1.000	20.02
ATOM	3609	CZ	ARG	B	252	82.532	30.796	15.850	1.000	22.56
ATOM	3610	NH1	ARG	B	252	82.029	30.538	14.647	1.000	17.65
ATOM	3611	NH2	ARG	B	252	81.959	30.267	16.922	1.000	22.29
ATOM	3612	C	ARG	B	252	88.771	32.770	15.468	1.000	18.40
ATOM	3613	O	ARG	B	252	88.956	33.959	15.692	1.000	15.46
ATOM	3614	N	LEU	B	253	89.172	32.173	14.356	1.000	21.76
ATOM	3615	CA	LEU	B	253	89.827	32.918	13.269	1.000	19.75
ATOM	3616	CB	LEU	B	253	91.273	32.462	13.119	1.000	16.90
ATOM	3617	CG	LEU	B	253	92.110	33.141	12.031	1.000	19.36
ATOM	3618	CD1	LEU	B	253	92.373	34.599	12.382	1.000	13.74
ATOM	3619	CD2	LEU	B	253	93.411	32.381	11.811	1.000	15.37
ATOM	3620	C	LEU	B	253	89.011	32.685	12.005	1.000	21.76
ATOM	3621	O	LEU	B	253	89.232	31.685	11.318	1.000	20.48
ATOM	3622	N	ASP	B	254	88.040	33.556	11.735	1.000	19.57
ATOM	3623	CA	ASP	B	254	86.997	33.164	10.802	1.000	19.40
ATOM	3624	CB	ASP	B	254	85.984	32.301	11.591	1.000	13.95
ATOM	3625	CG	ASP	B	254	85.259	33.087	12.664	1.000	18.25
ATOM	3626	OD1	ASP	B	254	85.428	34.315	12.794	1.000	14.45
ATOM	3627	OD2	ASP	B	254	84.480	32.462	13.415	1.000	22.32
ATOM	3628	C	ASP	B	254	86.256	34.300	10.122	1.000	21.71
ATOM	3629	O	ASP	B	254	85.196	34.050	9.522	1.000	23.65
ATOM	3630	N	GLY	B	255	86.713	35.539	10.180	1.000	20.84
ATOM	3631	CA	GLY	B	255	86.027	36.608	9.463	1.000	18.31
ATOM	3632	C	GLY	B	255	84.584	36.829	9.898	1.000	25.13
ATOM	3633	O	GLY	B	255	83.783	37.337	9.102	1.000	19.08
ATOM	3634	N	ALA	B	256	84.280	36.453	11.129	1.000	24.78
ATOM	3635	CA	ALA	B	256	83.025	36.658	11.830	1.000	21.84
ATOM	3636	CB	ALA	B	256	82.632	38.133	11.754	1.000	17.70
ATOM	3637	C	ALA	B	256	81.888	35.778	11.325	1.000	20.87
ATOM	3638	O	ALA	B	256	80.708	36.023	11.597	1.000	19.77
ATOM	3639	N	ILE	B	257	82.197	34.716	10.588	1.000	19.51
ATOM	3640	CA	ILE	B	257	81.157	33.804	10.126	1.000	18.52
ATOM	3641	CB	ILE	B	257	81.683	32.833	9.057	1.000	16.68
ATOM	3642	CG2	ILE	B	257	82.531	31.734	9.681	1.000	23.55
ATOM	3643	CG1	ILE	B	257	80.606	32.195	8.177	1.000	18.12
ATOM	3644	CD1	ILE	B	257	81.207	31.337	7.073	1.000	15.00
ATOM	3645	C	ILE	B	257	80.602	32.990	11.291	1.000	24.02
ATOM	3646	O	ILE	B	257	81.287	32.733	12.283	1.000	19.85
ATOM	3647	N	ARG	B	258	79.347	32.595	11.153	1.000	21.98
ATOM	3648	CA	ARG	B	258	78.698	31.606	12.004	1.000	20.95
ATOM	3649	CB	ARG	B	258	77.670	32.216	12.947	1.000	17.82
ATOM	3650	CG	ARG	B	258	78.207	33.229	13.949	1.000	17.12
ATOM	3651	CD	ARG	B	258	79.175	32.588	14.912	1.000	20.59
ATOM	3652	NE	ARG	B	258	79.702	33.469	15.952	1.000	20.13
ATOM	3653	CZ	ARG	B	258	80.800	34.200	15.832	1.000	23.28
ATOM	3654	NH1	ARG	B	258	81.214	34.974	16.827	1.000	17.97
ATOM	3655	NH2	ARG	B	258	81.506	34.173	14.705	1.000	17.45

ATOM	3656	C	ARG	B	258	78.078	30.576	11.055	1.000	21.87
ATOM	3657	O	ARG	B	258	77.313	30.946	10.160	1.000	23.38
ATOM	3658	N	MET	B	259	78.392	29.297	11.206	1.000	21.54
ATOM	3659	CA	MET	B	259	77.924	28.325	10.220	1.000	22.43
ATOM	3660	CB	MET	B	259	78.739	27.036	10.336	1.000	23.84
ATOM	3661	CG	MET	B	259	80.249	27.215	10.293	1.000	28.42
ATOM	3662	SD	MET	B	259	80.816	28.247	8.932	1.000	29.19
ATOM	3663	CE	MET	B	259	80.445	27.228	7.511	1.000	26.28
ATOM	3664	C	MET	B	259	76.447	27.994	10.357	1.000	30.61
ATOM	3665	O	MET	B	259	75.928	27.762	11.452	1.000	30.15
ATOM	3666	N	GLN	B	260	75.748	27.953	9.220	1.000	29.07
ATOM	3667	CA	GLN	B	260	74.339	27.512	9.259	1.000	25.36
ATOM	3668	CB	GLN	B	260	73.535	28.432	8.343	1.000	31.16
ATOM	3669	CG	GLN	B	260	72.731	29.454	9.136	1.000	45.72
ATOM	3670	CD	GLN	B	260	72.532	29.188	10.610	1.000	49.74
ATOM	3671	OE1	GLN	B	260	71.445	28.810	11.050	1.000	37.88
ATOM	3672	NE2	GLN	B	260	73.538	29.373	11.459	1.000	67.46
ATOM	3673	C	GLN	B	260	74.247	26.030	8.956	1.000	24.46
ATOM	3674	O	GLN	B	260	75.291	25.449	8.618	1.000	23.06
ATOM	3675	N	PRO	B	261	73.101	25.371	9.080	1.000	22.31
ATOM	3676	CD	PRO	B	261	71.765	25.894	9.433	1.000	28.76
ATOM	3677	CA	PRO	B	261	73.065	23.921	8.879	1.000	21.73
ATOM	3678	CB	PRO	B	261	71.567	23.586	8.950	1.000	25.36
ATOM	3679	CG	PRO	B	261	70.990	24.665	9.805	1.000	27.61
ATOM	3680	C	PRO	B	261	73.626	23.481	7.530	1.000	26.41
ATOM	3681	OT1	PRO	B	261	73.474	24.202	6.525	1.000	28.81
ATOM	3682	OT2	PRO	B	261	74.233	22.384	7.508	1.000	28.12
ATOM	3683	PN	NAD	B	262	94.476	21.958	6.429	1.000	28.31
ATOM	3684	O1N	NAD	B	262	93.463	22.904	5.865	1.000	34.51
ATOM	3685	O2N	NAD	B	262	95.865	22.443	6.568	1.000	23.47
ATOM	3686	O3P	NAD	B	262	94.370	20.567	5.731	1.000	33.68
ATOM	3687	O5M	NAD	B	262	93.895	21.576	7.886	1.000	30.78
ATOM	3688	C5M	NAD	B	262	94.768	21.765	9.037	1.000	26.31
ATOM	3689	C4M	NAD	B	262	93.935	21.757	10.307	1.000	25.70
ATOM	3690	O4M	NAD	B	262	92.977	22.828	10.156	1.000	29.89
ATOM	3691	C3M	NAD	B	262	93.132	20.450	10.430	1.000	31.27
ATOM	3692	O3M	NAD	B	262	92.997	20.071	11.809	1.000	40.08
ATOM	3693	C2M	NAD	B	262	91.731	20.826	9.885	1.000	32.57
ATOM	3694	O2M	NAD	B	262	90.747	19.918	10.417	1.000	40.60
ATOM	3695	C1M	NAD	B	262	91.677	22.240	10.432	1.000	30.08
ATOM	3696	N1N	NAD	B	262	90.616	23.120	9.899	1.000	37.23
ATOM	3697	C6N	NAD	B	262	89.624	23.559	10.781	1.000	28.95
ATOM	3698	C5N	NAD	B	262	88.566	24.365	10.368	1.000	32.41
ATOM	3699	C4N	NAD	B	262	88.465	24.847	8.942	1.000	33.49
ATOM	3700	C3N	NAD	B	262	89.608	24.363	8.069	1.000	32.22
ATOM	3701	C2N	NAD	B	262	90.607	23.542	8.552	1.000	37.43
ATOM	3702	C7N	NAD	B	262	89.613	24.852	6.631	1.000	36.14
ATOM	3703	O7N	NAD	B	262	88.579	25.278	6.126	1.000	41.68
ATOM	3704	N7N	NAD	B	262	90.771	24.795	5.981	1.000	29.37
ATOM	3705	PA	NAD	B	262	95.272	19.767	4.701	1.000	37.66
ATOM	3706	O1A	NAD	B	262	94.526	18.562	4.361	1.000	32.50
ATOM	3707	O2A	NAD	B	262	95.736	20.790	3.767	1.000	30.89
ATOM	3708	O5B	NAD	B	262	96.478	19.276	5.642	1.000	41.07
ATOM	3709	C5B	NAD	B	262	96.142	18.219	6.581	1.000	31.86
ATOM	3710	C4B	NAD	B	262	97.492	17.592	6.832	1.000	27.90
ATOM	3711	O4B	NAD	B	262	97.270	16.597	7.826	1.000	27.37
ATOM	3712	C3B	NAD	B	262	97.931	16.870	5.543	1.000	22.88
ATOM	3713	O3B	NAD	B	262	99.322	17.164	5.210	1.000	29.54
ATOM	3714	C2B	NAD	B	262	97.702	15.437	5.925	1.000	24.16
ATOM	3715	O2B	NAD	B	262	98.553	14.519	5.247	1.000	28.28
ATOM	3716	C1B	NAD	B	262	97.989	15.475	7.430	1.000	26.54

ATOM	3717	N9A	NAD	B	262	97.552	14.268	8.121	1.000	25.83
ATOM	3718	C4A	NAD	B	262	98.303	13.579	8.987	1.000	20.78
ATOM	3719	N3A	NAD	B	262	99.524	13.651	9.529	1.000	17.71
ATOM	3720	C2A	NAD	B	262	99.938	12.740	10.403	1.000	15.99
ATOM	3721	N1A	NAD	B	262	99.171	11.723	10.781	1.000	21.15
ATOM	3722	C6A	NAD	B	262	97.933	11.578	10.284	1.000	27.89
ATOM	3723	C5A	NAD	B	262	97.508	12.537	9.367	1.000	24.05
ATOM	3724	N7A	NAD	B	262	96.312	12.565	8.759	1.000	22.87
ATOM	3725	C8A	NAD	B	262	96.368	13.656	7.986	1.000	18.27
ATOM	3726	N6A	NAD	B	262	97.174	10.564	10.660	1.000	24.18
ATOM	3727	CB	SER	C	7	104.044	47.282	9.332	1.000	66.78
ATOM	3728	C	SER	C	7	101.832	47.872	10.314	1.000	47.05
ATOM	3729	O	SER	C	7	100.991	48.304	9.526	1.000	47.44
ATOM	3730	N	SER	C	7	102.108	45.815	8.998	1.000	59.49
ATOM	3731	CA	SER	C	7	102.758	46.727	9.929	1.000	50.05
ATOM	3732	N	VAL	C	8	101.991	48.376	11.537	1.000	41.20
ATOM	3733	CA	VAL	C	8	101.083	49.420	12.005	1.000	36.25
ATOM	3734	CB	VAL	C	8	100.808	49.295	13.515	1.000	37.80
ATOM	3735	CG1	VAL	C	8	100.118	47.971	13.818	1.000	30.04
ATOM	3736	CG2	VAL	C	8	102.100	49.440	14.305	1.000	28.58
ATOM	3737	C	VAL	C	8	101.644	50.798	11.690	1.000	32.07
ATOM	3738	O	VAL	C	8	101.009	51.814	11.974	1.000	33.78
ATOM	3739	N	LYS	C	9	102.836	50.817	11.102	1.000	30.77
ATOM	3740	CA	LYS	C	9	103.482	52.078	10.746	1.000	29.01
ATOM	3741	CB	LYS	C	9	104.767	51.812	9.976	1.000	28.15
ATOM	3742	C	LYS	C	9	102.541	52.963	9.940	1.000	29.94
ATOM	3743	O	LYS	C	9	101.941	52.514	8.968	1.000	29.66
ATOM	3744	N	GLY	C	10	102.385	54.215	10.360	1.000	31.59
ATOM	3745	CA	GLY	C	10	101.522	55.142	9.666	1.000	33.52
ATOM	3746	C	GLY	C	10	100.057	55.094	10.031	1.000	32.35
ATOM	3747	O	GLY	C	10	99.310	56.020	9.691	1.000	35.47
ATOM	3748	N	LEU	C	11	99.599	54.052	10.721	1.000	28.45
ATOM	3749	CA	LEU	C	11	98.186	53.987	11.099	1.000	25.53
ATOM	3750	CB	LEU	C	11	97.849	52.594	11.639	1.000	24.47
ATOM	3751	CG	LEU	C	11	97.907	51.473	10.593	1.000	34.47
ATOM	3752	CD1	LEU	C	11	97.628	50.114	11.217	1.000	35.93
ATOM	3753	CD2	LEU	C	11	96.927	51.755	9.458	1.000	32.14
ATOM	3754	C	LEU	C	11	97.824	55.052	12.125	1.000	25.52
ATOM	3755	O	LEU	C	11	98.680	55.511	12.884	1.000	27.62
ATOM	3756	N	VAL	C	12	96.557	55.451	12.149	1.000	24.05
ATOM	3757	CA	VAL	C	12	96.051	56.379	13.153	1.000	24.59
ATOM	3758	CB	VAL	C	12	95.350	57.592	12.516	1.000	28.40
ATOM	3759	CG1	VAL	C	12	94.813	58.519	13.597	1.000	22.74
ATOM	3760	CG2	VAL	C	12	96.305	58.326	11.584	1.000	26.07
ATOM	3761	C	VAL	C	12	95.076	55.672	14.091	1.000	30.65
ATOM	3762	O	VAL	C	12	94.058	55.119	13.655	1.000	28.77
ATOM	3763	N	ALA	C	13	95.402	55.687	15.386	1.000	25.84
ATOM	3764	CA	ALA	C	13	94.551	54.989	16.348	1.000	25.82
ATOM	3765	CB	ALA	C	13	95.315	53.854	17.018	1.000	25.53
ATOM	3766	C	ALA	C	13	93.994	55.938	17.407	1.000	26.90
ATOM	3767	O	ALA	C	13	94.733	56.727	17.992	1.000	28.28
ATOM	3768	N	VAL	C	14	92.690	55.845	17.641	1.000	23.52
ATOM	3769	CA	VAL	C	14	92.058	56.564	18.750	1.000	24.13
ATOM	3770	CB	VAL	C	14	90.708	57.180	18.375	1.000	24.45
ATOM	3771	CG1	VAL	C	14	90.033	57.820	19.581	1.000	22.78
ATOM	3772	CG2	VAL	C	14	90.876	58.221	17.275	1.000	23.77
ATOM	3773	C	VAL	C	14	91.912	55.568	19.903	1.000	27.36
ATOM	3774	O	VAL	C	14	91.304	54.511	19.729	1.000	23.19
ATOM	3775	N	ILE	C	15	92.497	55.901	21.050	1.000	27.18
ATOM	3776	CA	ILE	C	15	92.530	55.001	22.199	1.000	20.98
ATOM	3777	CB	ILE	C	15	93.992	54.654	22.542	1.000	21.64

ATOM	3778	CG2	ILE	C	15	94.074	53.721	23.739	1.000	24.49
ATOM	3779	CG1	ILE	C	15	94.753	54.070	21.352	1.000	25.53
ATOM	3780	CD1	ILE	C	15	96.229	53.822	21.576	1.000	30.45
ATOM	3781	C	ILE	C	15	91.820	55.612	23.392	1.000	23.68
ATOM	3782	O	ILE	C	15	92.291	56.563	24.024	1.000	23.20
ATOM	3783	N	THR	C	16	90.642	55.078	23.734	1.000	23.69
ATOM	3784	CA	THR	C	16	89.966	55.658	24.904	1.000	24.76
ATOM	3785	CB	THR	C	16	88.444	55.452	24.868	1.000	22.95
ATOM	3786	OG1	THR	C	16	88.140	54.146	25.361	1.000	22.63
ATOM	3787	CG2	THR	C	16	87.938	55.536	23.430	1.000	14.61
ATOM	3788	C	THR	C	16	90.564	55.057	26.172	1.000	17.75
ATOM	3789	O	THR	C	16	90.998	53.907	26.171	1.000	23.59
ATOM	3790	N	GLY	C	17	90.594	55.847	27.240	1.000	25.44
ATOM	3791	CA	GLY	C	17	91.312	55.462	28.451	1.000	21.38
ATOM	3792	C	GLY	C	17	92.807	55.446	28.172	1.000	26.04
ATOM	3793	O	GLY	C	17	93.583	54.716	28.787	1.000	26.02
ATOM	3794	N	GLY	C	18	93.241	56.260	27.212	1.000	25.57
ATOM	3795	CA	GLY	C	18	94.624	56.224	26.780	1.000	23.27
ATOM	3796	C	GLY	C	18	95.607	56.901	27.702	1.000	25.52
ATOM	3797	O	GLY	C	18	96.817	56.861	27.435	1.000	25.03
ATOM	3798	N	ALA	C	19	95.152	57.541	28.776	1.000	23.60
ATOM	3799	CA	ALA	C	19	96.093	58.208	29.676	1.000	22.47
ATOM	3800	CB	ALA	C	19	95.423	59.388	30.373	1.000	21.48
ATOM	3801	C	ALA	C	19	96.640	57.247	30.715	1.000	28.26
ATOM	3802	O	ALA	C	19	97.523	57.562	31.516	1.000	25.69
ATOM	3803	N	SER	C	20	96.107	56.022	30.754	1.000	25.74
ATOM	3804	CA	SER	C	20	96.517	55.152	31.870	1.000	24.16
ATOM	3805	CB	SER	C	20	95.640	55.492	33.083	1.000	25.59
ATOM	3806	OG	SER	C	20	95.760	54.584	34.149	1.000	25.32
ATOM	3807	C	SER	C	20	96.449	53.688	31.485	1.000	25.80
ATOM	3808	O	SER	C	20	95.846	53.324	30.474	1.000	22.31
ATOM	3809	N	GLY	C	21	97.084	52.851	32.302	1.000	24.52
ATOM	3810	CA	GLY	C	21	97.035	51.415	32.209	1.000	24.48
ATOM	3811	C	GLY	C	21	97.032	50.810	30.830	1.000	27.26
ATOM	3812	O	GLY	C	21	97.934	51.074	30.035	1.000	22.91
ATOM	3813	N	LEU	C	22	96.052	49.968	30.507	1.000	24.52
ATOM	3814	CA	LEU	C	22	96.083	49.212	29.254	1.000	21.40
ATOM	3815	CB	LEU	C	22	94.938	48.195	29.237	1.000	20.78
ATOM	3816	CG	LEU	C	22	94.886	47.203	30.401	1.000	17.62
ATOM	3817	CD1	LEU	C	22	93.684	46.276	30.275	1.000	16.40
ATOM	3818	CD2	LEU	C	22	96.149	46.360	30.485	1.000	18.61
ATOM	3819	C	LEU	C	22	96.032	50.112	28.022	1.000	22.73
ATOM	3820	O	LEU	C	22	96.725	49.853	27.028	1.000	26.59
ATOM	3821	N	GLY	C	23	95.224	51.166	28.040	1.000	22.05
ATOM	3822	CA	GLY	C	23	95.184	52.107	26.934	1.000	26.20
ATOM	3823	C	GLY	C	23	96.510	52.806	26.694	1.000	25.29
ATOM	3824	O	GLY	C	23	96.946	52.987	25.552	1.000	23.10
ATOM	3825	N	LEU	C	24	97.174	53.224	27.756	1.000	19.82
ATOM	3826	CA	LEU	C	24	98.463	53.904	27.656	1.000	21.17
ATOM	3827	CB	LEU	C	24	98.914	54.431	29.023	1.000	20.85
ATOM	3828	CG	LEU	C	24	100.322	55.038	29.077	1.000	25.39
ATOM	3829	CD1	LEU	C	24	100.405	56.276	28.194	1.000	21.88
ATOM	3830	CD2	LEU	C	24	100.710	55.359	30.513	1.000	24.95
ATOM	3831	C	LEU	C	24	99.534	52.971	27.109	1.000	23.71
ATOM	3832	O	LEU	C	24	100.353	53.352	26.274	1.000	26.75
ATOM	3833	N	ALA	C	25	99.530	51.733	27.596	1.000	23.88
ATOM	3834	CA	ALA	C	25	100.486	50.731	27.129	1.000	23.51
ATOM	3835	CB	ALA	C	25	100.339	49.469	27.962	1.000	22.54
ATOM	3836	C	ALA	C	25	100.294	50.444	25.646	1.000	26.08
ATOM	3837	O	ALA	C	25	101.252	50.214	24.908	1.000	27.79
ATOM	3838	N	THR	C	26	99.036	50.458	25.215	1.000	27.03

ATOM	3839	CA	THR	C	26	98.726	50.283	23.797	1.000	23.27
ATOM	3840	CB	THR	C	26	97.210	50.151	23.588	1.000	23.63
ATOM	3841	OG1	THR	C	26	96.757	49.018	24.341	1.000	24.28
ATOM	3842	CG2	THR	C	26	96.879	49.871	22.129	1.000	19.08
ATOM	3843	C	THR	C	26	99.285	51.445	22.990	1.000	20.18
ATOM	3844	O	THR	C	26	99.967	51.246	21.983	1.000	26.90
ATOM	3845	N	ALA	C	27	99.013	52.666	23.438	1.000	18.50
ATOM	3846	CA	ALA	C	27	99.545	53.852	22.780	1.000	24.38
ATOM	3847	CB	ALA	C	27	99.097	55.102	23.521	1.000	24.65
ATOM	3848	C	ALA	C	27	101.065	53.784	22.670	1.000	27.80
ATOM	3849	O	ALA	C	27	101.645	53.987	21.603	1.000	28.51
ATOM	3850	N	GLU	C	28	101.754	53.489	23.761	1.000	25.77
ATOM	3851	CA	GLU	C	28	103.204	53.346	23.738	1.000	28.24
ATOM	3852	CB	GLU	C	28	103.686	52.865	25.126	1.000	27.28
ATOM	3853	CG	GLU	C	28	103.837	54.027	26.089	1.000	30.52
ATOM	3854	CD	GLU	C	28	103.849	53.670	27.559	1.000	36.62
ATOM	3855	OE1	GLU	C	28	103.834	54.636	28.356	1.000	39.77
ATOM	3856	OE2	GLU	C	28	103.875	52.478	27.938	1.000	39.86
ATOM	3857	C	GLU	C	28	103.689	52.395	22.657	1.000	29.47
ATOM	3858	O	GLU	C	28	104.529	52.716	21.819	1.000	24.48
ATOM	3859	N	ARG	C	29	103.163	51.173	22.643	1.000	26.01
ATOM	3860	CA	ARG	C	29	103.627	50.179	21.687	1.000	24.39
ATOM	3861	CB	ARG	C	29	102.929	48.832	21.940	1.000	22.49
ATOM	3862	CG	ARG	C	29	103.387	47.773	20.954	1.000	25.33
ATOM	3863	CD	ARG	C	29	102.736	46.417	21.157	1.000	25.09
ATOM	3864	NE	ARG	C	29	103.371	45.445	20.252	1.000	26.15
ATOM	3865	CZ	ARG	C	29	104.492	44.805	20.567	1.000	29.99
ATOM	3866	NH1	ARG	C	29	105.034	43.943	19.722	1.000	32.98
ATOM	3867	NH2	ARG	C	29	105.082	45.024	21.735	1.000	29.67
ATOM	3868	C	ARG	C	29	103.393	50.615	20.247	1.000	29.05
ATOM	3869	O	ARG	C	29	104.290	50.524	19.416	1.000	30.10
ATOM	3870	N	LEU	C	30	102.181	51.074	19.944	1.000	24.61
ATOM	3871	CA	LEU	C	30	101.845	51.433	18.569	1.000	27.57
ATOM	3872	CB	LEU	C	30	100.340	51.702	18.463	1.000	27.67
ATOM	3873	CG	LEU	C	30	99.412	50.514	18.748	1.000	26.24
ATOM	3874	CD1	LEU	C	30	97.951	50.907	18.577	1.000	17.98
ATOM	3875	CD2	LEU	C	30	99.739	49.330	17.852	1.000	26.64
ATOM	3876	C	LEU	C	30	102.657	52.632	18.101	1.000	30.46
ATOM	3877	O	LEU	C	30	103.199	52.663	16.993	1.000	32.23
ATOM	3878	N	VAL	C	31	102.757	53.649	18.946	1.000	25.35
ATOM	3879	CA	VAL	C	31	103.564	54.824	18.622	1.000	28.65
ATOM	3880	CB	VAL	C	31	103.384	55.913	19.688	1.000	34.14
ATOM	3881	CG1	VAL	C	31	104.538	56.899	19.707	1.000	41.82
ATOM	3882	CG2	VAL	C	31	102.065	56.648	19.435	1.000	29.57
ATOM	3883	C	VAL	C	31	105.019	54.417	18.474	1.000	30.00
ATOM	3884	O	VAL	C	31	105.720	54.884	17.575	1.000	34.69
ATOM	3885	N	GLY	C	32	105.491	53.529	19.341	1.000	25.99
ATOM	3886	CA	GLY	C	32	106.857	53.035	19.228	1.000	28.69
ATOM	3887	C	GLY	C	32	107.124	52.338	17.906	1.000	35.56
ATOM	3888	O	GLY	C	32	108.267	52.191	17.471	1.000	28.87
ATOM	3889	N	GLN	C	33	106.061	51.887	17.249	1.000	36.98
ATOM	3890	CA	GLN	C	33	106.139	51.231	15.959	1.000	35.59
ATOM	3891	CB	GLN	C	33	105.129	50.079	15.896	1.000	39.66
ATOM	3892	CG	GLN	C	33	105.422	48.955	16.881	1.000	44.72
ATOM	3893	CD	GLN	C	33	106.200	47.830	16.228	1.000	49.92
ATOM	3894	OE1	GLN	C	33	105.897	47.417	15.105	1.000	58.45
ATOM	3895	NE2	GLN	C	33	107.213	47.333	16.933	1.000	58.98
ATOM	3896	C	GLN	C	33	105.857	52.191	14.812	1.000	33.46
ATOM	3897	O	GLN	C	33	105.688	51.726	13.681	1.000	33.18
ATOM	3898	N	GLY	C	34	105.779	53.497	15.049	1.000	29.41
ATOM	3899	CA	GLY	C	34	105.569	54.436	13.961	1.000	29.74

ATOM	3900	C	GLY	C	34	104.129	54.744	13.625	1.000	34.10
ATOM	3901	O	GLY	C	34	103.831	55.329	12.575	1.000	29.85
ATOM	3902	N	ALA	C	35	103.191	54.367	14.501	1.000	31.11
ATOM	3903	CA	ALA	C	35	101.797	54.764	14.286	1.000	24.85
ATOM	3904	CB	ALA	C	35	100.850	53.680	14.768	1.000	24.26
ATOM	3905	C	ALA	C	35	101.518	56.086	14.980	1.000	26.16
ATOM	3906	O	ALA	C	35	102.344	56.612	15.728	1.000	30.99
ATOM	3907	N	SER	C	36	100.343	56.674	14.751	1.000	25.80
ATOM	3908	CA	SER	C	36	100.006	57.889	15.494	1.000	30.50
ATOM	3909	CB	SER	C	36	99.592	59.028	14.564	1.000	29.64
ATOM	3910	OG	SER	C	36	100.588	59.261	13.582	1.000	30.71
ATOM	3911	C	SER	C	36	98.904	57.581	16.499	1.000	33.79
ATOM	3912	O	SER	C	36	98.000	56.779	16.254	1.000	29.57
ATOM	3913	N	ALA	C	37	98.960	58.220	17.667	1.000	30.46
ATOM	3914	CA	ALA	C	37	97.940	57.900	18.666	1.000	29.38
ATOM	3915	CB	ALA	C	37	98.571	57.180	19.846	1.000	26.18
ATOM	3916	C	ALA	C	37	97.195	59.145	19.125	1.000	24.63
ATOM	3917	O	ALA	C	37	97.739	60.231	19.270	1.000	31.10
ATOM	3918	N	VAL	C	38	95.903	58.948	19.346	1.000	23.46
ATOM	3919	CA	VAL	C	38	95.060	59.963	19.960	1.000	25.11
ATOM	3920	CB	VAL	C	38	93.825	60.332	19.129	1.000	26.80
ATOM	3921	CG1	VAL	C	38	92.957	61.323	19.893	1.000	22.47
ATOM	3922	CG2	VAL	C	38	94.251	60.893	17.778	1.000	31.11
ATOM	3923	C	VAL	C	38	94.611	59.420	21.315	1.000	28.98
ATOM	3924	O	VAL	C	38	93.885	58.425	21.331	1.000	23.94
ATOM	3925	N	LEU	C	39	95.066	60.051	22.396	1.000	28.48
ATOM	3926	CA	LEU	C	39	94.646	59.587	23.721	1.000	24.19
ATOM	3927	CB	LEU	C	39	95.697	59.886	24.775	1.000	24.94
ATOM	3928	CG	LEU	C	39	97.140	59.481	24.489	1.000	23.07
ATOM	3929	CD1	LEU	C	39	98.018	59.768	25.704	1.000	24.37
ATOM	3930	CD2	LEU	C	39	97.225	58.014	24.090	1.000	20.30
ATOM	3931	C	LEU	C	39	93.327	60.247	24.098	1.000	24.84
ATOM	3932	O	LEU	C	39	93.298	61.411	24.488	1.000	30.15
ATOM	3933	N	LEU	C	40	92.230	59.509	23.971	1.000	24.08
ATOM	3934	CA	LEU	C	40	90.934	60.058	24.383	1.000	22.68
ATOM	3935	CB	LEU	C	40	89.823	59.471	23.529	1.000	18.90
ATOM	3936	CG	LEU	C	40	88.475	60.190	23.477	1.000	24.88
ATOM	3937	CD1	LEU	C	40	87.713	59.786	22.218	1.000	25.54
ATOM	3938	CD2	LEU	C	40	87.628	59.900	24.705	1.000	23.21
ATOM	3939	C	LEU	C	40	90.713	59.765	25.863	1.000	23.80
ATOM	3940	O	LEU	C	40	90.476	58.618	26.258	1.000	27.07
ATOM	3941	N	ASP	C	41	90.796	60.777	26.718	1.000	25.76
ATOM	3942	CA	ASP	C	41	90.600	60.487	28.149	1.000	28.47
ATOM	3943	CB	ASP	C	41	91.923	60.028	28.746	1.000	21.68
ATOM	3944	CG	ASP	C	41	91.767	59.043	29.884	1.000	27.64
ATOM	3945	OD1	ASP	C	41	90.911	59.267	30.766	1.000	27.48
ATOM	3946	OD2	ASP	C	41	92.503	58.037	29.925	1.000	26.03
ATOM	3947	C	ASP	C	41	90.008	61.697	28.857	1.000	28.20
ATOM	3948	O	ASP	C	41	89.924	62.770	28.254	1.000	24.75
ATOM	3949	N	LEU	C	42	89.579	61.540	30.108	1.000	27.88
ATOM	3950	CA	LEU	C	42	88.935	62.638	30.826	1.000	28.79
ATOM	3951	CB	LEU	C	42	88.405	62.159	32.179	1.000	27.37
ATOM	3952	CG	LEU	C	42	87.154	61.285	32.154	1.000	29.50
ATOM	3953	CD1	LEU	C	42	86.833	60.741	33.543	1.000	27.78
ATOM	3954	CD2	LEU	C	42	85.933	62.040	31.654	1.000	18.12
ATOM	3955	C	LEU	C	42	89.904	63.797	31.016	1.000	27.41
ATOM	3956	O	LEU	C	42	91.117	63.609	31.095	1.000	24.79
ATOM	3957	N	PRO	C	43	89.386	65.018	31.082	1.000	30.98
ATOM	3958	CD	PRO	C	43	87.971	65.382	30.912	1.000	30.13
ATOM	3959	CA	PRO	C	43	90.239	66.179	31.336	1.000	29.06
ATOM	3960	CB	PRO	C	43	89.245	67.330	31.472	1.000	28.41

ATOM	3961	CG	PRO	C	43	88.035	66.874	30.736	1.000	31.21
ATOM	3962	C	PRO	C	43	91.032	66.032	32.629	1.000	33.60
ATOM	3963	O	PRO	C	43	92.161	66.519	32.738	1.000	37.33
ATOM	3964	N	ASN	C	44	90.481	65.352	33.627	1.000	30.55
ATOM	3965	CA	ASN	C	44	91.177	65.227	34.903	1.000	40.13
ATOM	3966	CB	ASN	C	44	90.175	64.806	35.992	1.000	50.07
ATOM	3967	CG	ASN	C	44	89.303	63.658	35.506	1.000	55.50
ATOM	3968	OD1	ASN	C	44	88.190	63.885	35.027	1.000	70.86
ATOM	3969	ND2	ASN	C	44	89.810	62.439	35.615	1.000	60.21
ATOM	3970	C	ASN	C	44	92.324	64.230	34.858	1.000	40.20
ATOM	3971	O	ASN	C	44	93.177	64.187	35.751	1.000	41.19
ATOM	3972	N	SER	C	45	92.372	63.388	33.824	1.000	35.46
ATOM	3973	CA	SER	C	45	93.457	62.399	33.795	1.000	31.90
ATOM	3974	CB	SER	C	45	93.128	61.324	32.766	1.000	32.38
ATOM	3975	OG	SER	C	45	93.103	61.854	31.450	1.000	28.70
ATOM	3976	C	SER	C	45	94.769	63.103	33.486	1.000	38.08
ATOM	3977	O	SER	C	45	94.780	64.329	33.327	1.000	65.11
ATOM	3978	N	GLY	C	46	95.879	62.387	33.388	1.000	35.97
ATOM	3979	CA	GLY	C	46	97.111	63.008	32.913	1.000	32.68
ATOM	3980	C	GLY	C	46	97.340	62.706	31.442	1.000	31.30
ATOM	3981	O	GLY	C	46	98.450	62.427	30.976	1.000	31.52
ATOM	3982	N	GLY	C	47	96.277	62.742	30.636	1.000	29.98
ATOM	3983	CA	GLY	C	47	96.481	62.416	29.226	1.000	29.97
ATOM	3984	C	GLY	C	47	97.432	63.390	28.553	1.000	33.91
ATOM	3985	O	GLY	C	47	98.246	62.999	27.713	1.000	33.43
ATOM	3986	N	GLU	C	48	97.323	64.665	28.921	1.000	32.08
ATOM	3987	CA	GLU	C	48	98.109	65.710	28.283	1.000	31.51
ATOM	3988	CB	GLU	C	48	97.724	67.092	28.829	1.000	40.11
ATOM	3989	CG	GLU	C	48	98.026	68.195	27.818	1.000	49.80
ATOM	3990	CD	GLU	C	48	97.555	67.869	26.411	1.000	59.15
ATOM	3991	OE1	GLU	C	48	98.394	67.471	25.570	1.000	67.05
ATOM	3992	OE2	GLU	C	48	96.346	68.010	26.125	1.000	70.70
ATOM	3993	C	GLU	C	48	99.594	65.470	28.468	1.000	30.68
ATOM	3994	O	GLU	C	48	100.397	65.536	27.540	1.000	35.10
ATOM	3995	N	ALA	C	49	99.972	65.167	29.703	1.000	32.08
ATOM	3996	CA	ALA	C	49	101.347	64.793	29.995	1.000	31.11
ATOM	3997	CB	ALA	C	49	101.531	64.660	31.508	1.000	30.63
ATOM	3998	C	ALA	C	49	101.746	63.503	29.298	1.000	30.77
ATOM	3999	O	ALA	C	49	102.884	63.340	28.838	1.000	29.44
ATOM	4000	N	GLN	C	50	100.846	62.522	29.199	1.000	29.35
ATOM	4001	CA	GLN	C	50	101.279	61.262	28.586	1.000	26.90
ATOM	4002	CB	GLN	C	50	100.269	60.141	28.800	1.000	28.09
ATOM	4003	CG	GLN	C	50	99.978	59.785	30.251	1.000	26.70
ATOM	4004	CD	GLN	C	50	101.166	59.197	30.982	1.000	32.02
ATOM	4005	OE1	GLN	C	50	101.166	59.082	32.210	1.000	48.10
ATOM	4006	NE2	GLN	C	50	102.214	58.801	30.271	1.000	22.28
ATOM	4007	C	GLN	C	50	101.550	61.478	27.096	1.000	27.62
ATOM	4008	O	GLN	C	50	102.562	61.021	26.560	1.000	30.87
ATOM	4009	N	ALA	C	51	100.657	62.187	26.428	1.000	27.39
ATOM	4010	CA	ALA	C	51	100.819	62.514	25.014	1.000	28.62
ATOM	4011	CB	ALA	C	51	99.605	63.287	24.526	1.000	30.43
ATOM	4012	C	ALA	C	51	102.098	63.308	24.788	1.000	31.90
ATOM	4013	O	ALA	C	51	102.817	63.085	23.815	1.000	32.71
ATOM	4014	N	LYS	C	52	102.390	64.227	25.704	1.000	31.86
ATOM	4015	CA	LYS	C	52	103.638	64.978	25.670	1.000	33.03
ATOM	4016	CB	LYS	C	52	103.662	66.008	26.800	1.000	39.70
ATOM	4017	CG	LYS	C	52	105.039	66.230	27.402	1.000	53.96
ATOM	4018	CD	LYS	C	52	105.132	65.671	28.815	1.000	63.00
ATOM	4019	CE	LYS	C	52	106.125	64.528	28.890	1.000	69.80
ATOM	4020	NZ	LYS	C	52	105.816	63.592	30.016	1.000	78.05
ATOM	4021	C	LYS	C	52	104.831	64.045	25.782	1.000	30.59

ATOM	4022	O	LYS	C	52	105.826	64.168	25.065	1.000	32.36
ATOM	4023	N	LYS	C	53	104.769	63.067	26.683	1.000	31.21
ATOM	4024	CA	LYS	C	53	105.885	62.120	26.736	1.000	35.16
ATOM	4025	CB	LYS	C	53	105.802	61.244	27.977	1.000	36.21
ATOM	4026	C	LYS	C	53	105.939	61.247	25.489	1.000	36.60
ATOM	4027	O	LYS	C	53	107.020	60.790	25.098	1.000	40.19
ATOM	4028	N	LEU	C	54	104.815	60.969	24.826	1.000	34.36
ATOM	4029	CA	LEU	C	54	104.927	59.996	23.720	1.000	32.18
ATOM	4030	CB	LEU	C	54	103.615	59.222	23.560	1.000	27.50
ATOM	4031	CG	LEU	C	54	103.407	58.081	24.561	1.000	31.07
ATOM	4032	CD1	LEU	C	54	102.020	57.479	24.408	1.000	30.58
ATOM	4033	CD2	LEU	C	54	104.489	57.021	24.404	1.000	31.81
ATOM	4034	C	LEU	C	54	105.329	60.632	22.401	1.000	31.63
ATOM	4035	O	LEU	C	54	105.575	59.930	21.414	1.000	40.05
ATOM	4036	N	GLY	C	55	105.421	61.960	22.329	1.000	32.10
ATOM	4037	CA	GLY	C	55	105.961	62.577	21.136	1.000	29.95
ATOM	4038	C	GLY	C	55	104.947	63.194	20.196	1.000	32.28
ATOM	4039	O	GLY	C	55	103.735	63.209	20.418	1.000	28.53
ATOM	4040	N	ASN	C	56	105.486	63.720	19.106	1.000	33.04
ATOM	4041	CA	ASN	C	56	104.760	64.427	18.070	1.000	38.21
ATOM	4042	CB	ASN	C	56	105.748	65.028	17.056	1.000	44.18
ATOM	4043	CG	ASN	C	56	106.691	66.006	17.736	1.000	51.34
ATOM	4044	OD1	ASN	C	56	107.868	66.077	17.392	1.000	62.21
ATOM	4045	ND2	ASN	C	56	106.166	66.740	18.711	1.000	49.99
ATOM	4046	C	ASN	C	56	103.766	63.540	17.342	1.000	34.73
ATOM	4047	O	ASN	C	56	102.839	64.058	16.713	1.000	36.02
ATOM	4048	N	ASN	C	57	103.925	62.221	17.402	1.000	34.43
ATOM	4049	CA	ASN	C	57	102.899	61.365	16.805	1.000	33.18
ATOM	4050	CB	ASN	C	57	103.541	60.105	16.224	1.000	33.00
ATOM	4051	CG	ASN	C	57	104.198	60.389	14.891	1.000	37.58
ATOM	4052	OD1	ASN	C	57	105.119	59.679	14.495	1.000	47.98
ATOM	4053	ND2	ASN	C	57	103.734	61.415	14.195	1.000	38.58
ATOM	4054	C	ASN	C	57	101.813	60.990	17.802	1.000	33.50
ATOM	4055	O	ASN	C	57	101.035	60.062	17.575	1.000	27.41
ATOM	4056	N	CYS	C	58	101.751	61.711	18.918	1.000	33.01
ATOM	4057	CA	CYS	C	58	100.719	61.391	19.908	1.000	31.29
ATOM	4058	CB	CYS	C	58	101.301	60.555	21.051	1.000	30.99
ATOM	4059	SG	CYS	C	58	100.105	60.157	22.353	1.000	31.90
ATOM	4060	C	CYS	C	58	100.076	62.656	20.444	1.000	28.04
ATOM	4061	O	CYS	C	58	100.747	63.580	20.893	1.000	32.84
ATOM	4062	N	VAL	C	59	98.745	62.722	20.402	1.000	30.91
ATOM	4063	CA	VAL	C	59	98.084	63.892	20.974	1.000	29.23
ATOM	4064	CB	VAL	C	59	97.517	64.839	19.902	1.000	33.71
ATOM	4065	CG1	VAL	C	59	98.594	65.184	18.884	1.000	36.94
ATOM	4066	CG2	VAL	C	59	96.317	64.225	19.204	1.000	30.60
ATOM	4067	C	VAL	C	59	96.965	63.455	21.921	1.000	30.45
ATOM	4068	O	VAL	C	59	96.410	62.366	21.791	1.000	27.62
ATOM	4069	N	PHE	C	60	96.666	64.341	22.860	1.000	28.52
ATOM	4070	CA	PHE	C	60	95.618	64.140	23.848	1.000	27.23
ATOM	4071	CB	PHE	C	60	96.073	64.674	25.208	1.000	27.71
ATOM	4072	CG	PHE	C	60	94.982	64.718	26.262	1.000	30.69
ATOM	4073	CD1	PHE	C	60	94.254	63.580	26.584	1.000	30.34
ATOM	4074	CD2	PHE	C	60	94.691	65.899	26.918	1.000	31.41
ATOM	4075	CE1	PHE	C	60	93.260	63.630	27.542	1.000	28.34
ATOM	4076	CE2	PHE	C	60	93.700	65.958	27.882	1.000	28.62
ATOM	4077	CZ	PHE	C	60	92.979	64.818	28.190	1.000	26.15
ATOM	4078	C	PHE	C	60	94.330	64.833	23.424	1.000	31.08
ATOM	4079	O	PHE	C	60	94.338	66.017	23.092	1.000	30.75
ATOM	4080	N	ALA	C	61	93.213	64.110	23.432	1.000	28.65
ATOM	4081	CA	ALA	C	61	91.925	64.751	23.174	1.000	24.00
ATOM	4082	CB	ALA	C	61	91.280	64.183	21.925	1.000	29.56

ATOM	4083	C	ALA	C	61	91.026	64.567	24.391	1.000	30.42
ATOM	4084	O	ALA	C	61	90.471	63.479	24.582	1.000	32.76
ATOM	4085	N	PRO	C	62	90.882	65.595	25.217	1.000	30.73
ATOM	4086	CD	PRO	C	62	91.412	66.960	25.062	1.000	28.67
ATOM	4087	CA	PRO	C	62	90.102	65.446	26.455	1.000	30.54
ATOM	4088	CB	PRO	C	62	90.213	66.817	27.120	1.000	29.29
ATOM	4089	CG	PRO	C	62	90.544	67.755	26.004	1.000	30.27
ATOM	4090	C	PRO	C	62	88.652	65.112	26.132	1.000	30.80
ATOM	4091	O	PRO	C	62	87.986	65.781	25.338	1.000	31.42
ATOM	4092	N	ALA	C	63	88.135	64.040	26.739	1.000	26.61
ATOM	4093	CA	ALA	C	63	86.749	63.698	26.433	1.000	28.05
ATOM	4094	CB	ALA	C	63	86.632	63.221	24.990	1.000	24.16
ATOM	4095	C	ALA	C	63	86.204	62.638	27.384	1.000	25.50
ATOM	4096	O	ALA	C	63	86.947	61.773	27.836	1.000	26.31
ATOM	4097	N	ASP	C	64	84.904	62.744	27.626	1.000	24.58
ATOM	4098	CA	ASP	C	64	84.120	61.747	28.329	1.000	27.67
ATOM	4099	CB	ASP	C	64	83.094	62.409	29.247	1.000	26.67
ATOM	4100	CG	ASP	C	64	82.271	61.419	30.050	1.000	28.82
ATOM	4101	OD1	ASP	C	64	81.576	61.883	30.984	1.000	33.57
ATOM	4102	OD2	ASP	C	64	82.294	60.201	29.768	1.000	25.98
ATOM	4103	C	ASP	C	64	83.426	60.859	27.298	1.000	25.59
ATOM	4104	O	ASP	C	64	82.706	61.389	26.465	1.000	22.07
ATOM	4105	N	VAL	C	65	83.639	59.554	27.361	1.000	26.21
ATOM	4106	CA	VAL	C	65	83.080	58.646	26.369	1.000	24.93
ATOM	4107	CB	VAL	C	65	83.678	57.227	26.476	1.000	22.24
ATOM	4108	CG1	VAL	C	65	85.150	57.254	26.085	1.000	16.05
ATOM	4109	CG2	VAL	C	65	83.488	56.662	27.874	1.000	22.57
ATOM	4110	C	VAL	C	65	81.563	58.544	26.450	1.000	23.05
ATOM	4111	O	VAL	C	65	80.938	58.056	25.506	1.000	25.98
ATOM	4112	N	THR	C	66	80.938	58.991	27.533	1.000	23.18
ATOM	4113	CA	THR	C	66	79.481	58.909	27.619	1.000	24.21
ATOM	4114	CB	THR	C	66	78.997	58.858	29.078	1.000	24.93
ATOM	4115	OG1	THR	C	66	79.413	60.068	29.732	1.000	26.10
ATOM	4116	CG2	THR	C	66	79.633	57.690	29.823	1.000	25.34
ATOM	4117	C	THR	C	66	78.803	60.099	26.951	1.000	27.97
ATOM	4118	O	THR	C	66	77.575	60.186	26.898	1.000	27.71
ATOM	4119	N	SER	C	67	79.585	61.042	26.442	1.000	26.34
ATOM	4120	CA	SER	C	67	79.029	62.246	25.852	1.000	25.87
ATOM	4121	CB	SER	C	67	79.689	63.482	26.475	1.000	21.35
ATOM	4122	OG	SER	C	67	79.591	64.578	25.568	1.000	28.25
ATOM	4123	C	SER	C	67	79.219	62.277	24.341	1.000	26.46
ATOM	4124	O	SER	C	67	80.341	62.168	23.844	1.000	29.77
ATOM	4125	N	GLU	C	68	78.127	62.428	23.610	1.000	28.34
ATOM	4126	CA	GLU	C	68	78.170	62.504	22.156	1.000	31.50
ATOM	4127	CB	GLU	C	68	76.753	62.721	21.616	1.000	32.05
ATOM	4128	CG	GLU	C	68	76.684	62.853	20.104	1.000	33.54
ATOM	4129	CD	GLU	C	68	75.253	62.873	19.607	1.000	35.59
ATOM	4130	OE1	GLU	C	68	74.801	61.833	19.095	1.000	38.18
ATOM	4131	OE2	GLU	C	68	74.581	63.915	19.722	1.000	44.21
ATOM	4132	C	GLU	C	68	79.089	63.626	21.680	1.000	30.11
ATOM	4133	O	GLU	C	68	79.968	63.428	20.844	1.000	28.18
ATOM	4134	N	LYS	C	69	78.862	64.808	22.240	1.000	24.11
ATOM	4135	CA	LYS	C	69	79.592	66.004	21.867	1.000	28.20
ATOM	4136	CB	LYS	C	69	79.047	67.213	22.629	1.000	35.93
ATOM	4137	C	LYS	C	69	81.089	65.862	22.105	1.000	27.82
ATOM	4138	O	LYS	C	69	81.906	66.263	21.283	1.000	27.44
ATOM	4139	N	ASP	C	70	81.475	65.301	23.241	1.000	26.83
ATOM	4140	CA	ASP	C	70	82.889	65.152	23.559	1.000	27.75
ATOM	4141	CB	ASP	C	70	83.065	64.567	24.965	1.000	30.47
ATOM	4142	CG	ASP	C	70	82.823	65.574	26.070	1.000	29.80
ATOM	4143	OD1	ASP	C	70	82.332	66.682	25.773	1.000	33.69

ATOM	4144	OD2	ASP	C	70	83.117	65.260	27.241	1.000	31.02
ATOM	4145	C	ASP	C	70	83.586	64.243	22.561	1.000	24.38
ATOM	4146	O	ASP	C	70	84.688	64.503	22.101	1.000	30.02
ATOM	4147	N	VAL	C	71	82.952	63.127	22.221	1.000	27.61
ATOM	4148	CA	VAL	C	71	83.622	62.165	21.339	1.000	26.47
ATOM	4149	CB	VAL	C	71	82.864	60.834	21.378	1.000	27.37
ATOM	4150	CG1	VAL	C	71	83.334	59.880	20.294	1.000	24.28
ATOM	4151	CG2	VAL	C	71	83.017	60.198	22.758	1.000	25.10
ATOM	4152	C	VAL	C	71	83.705	62.753	19.936	1.000	27.36
ATOM	4153	O	VAL	C	71	84.659	62.525	19.198	1.000	26.11
ATOM	4154	N	GLN	C	72	82.679	63.523	19.578	1.000	25.77
ATOM	4155	CA	GLN	C	72	82.674	64.223	18.296	1.000	28.67
ATOM	4156	CB	GLN	C	72	81.335	64.952	18.120	1.000	28.15
ATOM	4157	CG	GLN	C	72	80.246	63.991	17.643	1.000	29.52
ATOM	4158	CD	GLN	C	72	78.888	64.644	17.523	1.000	35.68
ATOM	4159	OE1	GLN	C	72	78.543	65.538	18.295	1.000	41.19
ATOM	4160	NE2	GLN	C	72	78.111	64.190	16.545	1.000	41.33
ATOM	4161	C	GLN	C	72	83.847	65.184	18.218	1.000	26.89
ATOM	4162	O	GLN	C	72	84.553	65.280	17.213	1.000	29.43
ATOM	4163	N	THR	C	73	84.069	65.908	19.310	1.000	25.94
ATOM	4164	CA	THR	C	73	85.192	66.835	19.397	1.000	31.15
ATOM	4165	CB	THR	C	73	85.154	67.610	20.731	1.000	36.88
ATOM	4166	OG1	THR	C	73	83.936	68.365	20.792	1.000	35.60
ATOM	4167	CG2	THR	C	73	86.302	68.600	20.821	1.000	35.19
ATOM	4168	C	THR	C	73	86.522	66.114	19.268	1.000	30.75
ATOM	4169	O	THR	C	73	87.393	66.469	18.471	1.000	34.22
ATOM	4170	N	ALA	C	74	86.708	65.058	20.060	1.000	23.49
ATOM	4171	CA	ALA	C	74	87.961	64.318	19.966	1.000	22.59
ATOM	4172	CB	ALA	C	74	87.997	63.269	21.072	1.000	29.44
ATOM	4173	C	ALA	C	74	88.145	63.676	18.598	1.000	27.87
ATOM	4174	O	ALA	C	74	89.250	63.617	18.057	1.000	30.18
ATOM	4175	N	LEU	C	75	87.069	63.168	17.991	1.000	25.90
ATOM	4176	CA	LEU	C	75	87.221	62.568	16.671	1.000	27.31
ATOM	4177	CB	LEU	C	75	85.939	61.827	16.293	1.000	27.10
ATOM	4178	CG	LEU	C	75	85.631	60.560	17.089	1.000	26.63
ATOM	4179	CD1	LEU	C	75	84.376	59.891	16.544	1.000	25.59
ATOM	4180	CD2	LEU	C	75	86.809	59.596	17.085	1.000	21.82
ATOM	4181	C	LEU	C	75	87.570	63.625	15.627	1.000	26.22
ATOM	4182	O	LEU	C	75	88.385	63.397	14.736	1.000	27.99
ATOM	4183	N	ALA	C	76	86.965	64.798	15.733	1.000	27.36
ATOM	4184	CA	ALA	C	76	87.272	65.918	14.852	1.000	32.93
ATOM	4185	CB	ALA	C	76	86.361	67.096	15.146	1.000	29.31
ATOM	4186	C	ALA	C	76	88.739	66.314	14.998	1.000	38.15
ATOM	4187	O	ALA	C	76	89.433	66.565	14.012	1.000	34.89
ATOM	4188	N	LEU	C	77	89.202	66.352	16.247	1.000	34.23
ATOM	4189	CA	LEU	C	77	90.606	66.642	16.522	1.000	29.46
ATOM	4190	CB	LEU	C	77	90.848	66.660	18.026	1.000	31.15
ATOM	4191	CG	LEU	C	77	92.189	67.144	18.567	1.000	33.61
ATOM	4192	CD1	LEU	C	77	92.028	67.757	19.953	1.000	38.66
ATOM	4193	CD2	LEU	C	77	93.200	66.013	18.627	1.000	30.53
ATOM	4194	C	LEU	C	77	91.499	65.619	15.831	1.000	33.47
ATOM	4195	O	LEU	C	77	92.480	65.970	15.166	1.000	37.01
ATOM	4196	N	ALA	C	78	91.162	64.338	15.990	1.000	28.96
ATOM	4197	CA	ALA	C	78	91.990	63.287	15.407	1.000	31.24
ATOM	4198	CB	ALA	C	78	91.465	61.905	15.761	1.000	32.91
ATOM	4199	C	ALA	C	78	92.072	63.446	13.891	1.000	31.97
ATOM	4200	O	ALA	C	78	93.137	63.329	13.293	1.000	33.08
ATOM	4201	N	LYS	C	79	90.923	63.717	13.284	1.000	33.42
ATOM	4202	CA	LYS	C	79	90.882	63.915	11.840	1.000	37.37
ATOM	4203	CB	LYS	C	79	89.446	64.115	11.390	1.000	32.88
ATOM	4204	C	LYS	C	79	91.777	65.092	11.459	1.000	38.05

ATOM	4205	O	LYS	C	79	92.616	64.988	10.565	1.000	36.55
ATOM	4206	N	GLY	C	80	91.582	66.192	12.174	1.000	36.20
ATOM	4207	CA	GLY	C	80	92.298	67.424	11.934	1.000	40.19
ATOM	4208	C	GLY	C	80	93.796	67.287	12.069	1.000	42.52
ATOM	4209	O	GLY	C	80	94.556	67.884	11.303	1.000	42.68
ATOM	4210	N	LYS	C	81	94.261	66.511	13.043	1.000	36.24
ATOM	4211	CA	LYS	C	81	95.704	66.397	13.241	1.000	32.94
ATOM	4212	CB	LYS	C	81	95.971	66.098	14.717	1.000	38.74
ATOM	4213	CG	LYS	C	81	97.400	65.692	15.034	1.000	46.40
ATOM	4214	CD	LYS	C	81	98.200	66.940	15.392	1.000	53.53
ATOM	4215	CE	LYS	C	81	99.576	66.590	15.931	1.000	57.14
ATOM	4216	NZ	LYS	C	81	100.629	67.536	15.458	1.000	61.84
ATOM	4217	C	LYS	C	81	96.334	65.319	12.371	1.000	36.28
ATOM	4218	O	LYS	C	81	97.445	65.464	11.850	1.000	33.53
ATOM	4219	N	PHE	C	82	95.645	64.189	12.197	1.000	31.94
ATOM	4220	CA	PHE	C	82	96.300	63.051	11.561	1.000	31.79
ATOM	4221	CB	PHE	C	82	96.397	61.876	12.544	1.000	35.42
ATOM	4222	CG	PHE	C	82	97.306	62.153	13.737	1.000	33.42
ATOM	4223	CD1	PHE	C	82	98.607	62.586	13.571	1.000	29.90
ATOM	4224	CD2	PHE	C	82	96.833	61.979	15.027	1.000	30.22
ATOM	4225	CE1	PHE	C	82	99.410	62.839	14.665	1.000	34.59
ATOM	4226	CE2	PHE	C	82	97.631	62.218	16.128	1.000	30.43
ATOM	4227	CZ	PHE	C	82	98.935	62.652	15.953	1.000	32.82
ATOM	4228	C	PHE	C	82	95.601	62.606	10.284	1.000	31.97
ATOM	4229	O	PHE	C	82	96.012	61.617	9.681	1.000	33.07
ATOM	4230	N	GLY	C	83	94.564	63.330	9.882	1.000	36.06
ATOM	4231	CA	GLY	C	83	93.905	63.142	8.614	1.000	36.63
ATOM	4232	C	GLY	C	83	92.850	62.066	8.554	1.000	38.62
ATOM	4233	O	GLY	C	83	91.883	62.213	7.800	1.000	37.81
ATOM	4234	N	ARG	C	84	93.009	60.993	9.320	1.000	35.39
ATOM	4235	CA	ARG	C	84	92.071	59.880	9.284	1.000	33.37
ATOM	4236	CB	ARG	C	84	92.318	58.979	8.067	1.000	28.21
ATOM	4237	CG	ARG	C	84	93.743	58.498	7.891	1.000	35.27
ATOM	4238	CD	ARG	C	84	93.826	57.071	7.382	1.000	44.86
ATOM	4239	NE	ARG	C	84	93.436	56.944	5.991	1.000	51.21
ATOM	4240	CZ	ARG	C	84	93.063	55.842	5.359	1.000	56.61
ATOM	4241	NH1	ARG	C	84	92.734	55.900	4.069	1.000	64.31
ATOM	4242	NH2	ARG	C	84	93.001	54.662	5.962	1.000	35.41
ATOM	4243	C	ARG	C	84	92.154	59.048	10.565	1.000	33.24
ATOM	4244	O	ARG	C	84	93.077	59.225	11.362	1.000	35.72
ATOM	4245	N	VAL	C	85	91.184	58.149	10.735	1.000	26.45
ATOM	4246	CA	VAL	C	85	91.223	57.211	11.857	1.000	26.63
ATOM	4247	CB	VAL	C	85	90.098	57.408	12.883	1.000	27.68
ATOM	4248	CG1	VAL	C	85	90.208	56.362	13.985	1.000	26.03
ATOM	4249	CG2	VAL	C	85	90.133	58.808	13.477	1.000	22.07
ATOM	4250	C	VAL	C	85	91.178	55.785	11.315	1.000	26.47
ATOM	4251	O	VAL	C	85	90.213	55.387	10.671	1.000	27.69
ATOM	4252	N	ASP	C	86	92.247	55.035	11.586	1.000	27.28
ATOM	4253	CA	ASP	C	86	92.348	53.677	11.069	1.000	25.47
ATOM	4254	CB	ASP	C	86	93.793	53.404	10.635	1.000	25.79
ATOM	4255	CG	ASP	C	86	94.222	54.369	9.543	1.000	31.04
ATOM	4256	OD1	ASP	C	86	95.098	55.218	9.787	1.000	28.57
ATOM	4257	OD2	ASP	C	86	93.649	54.261	8.441	1.000	33.34
ATOM	4258	C	ASP	C	86	91.927	52.636	12.097	1.000	25.22
ATOM	4259	O	ASP	C	86	91.471	51.552	11.752	1.000	22.72
ATOM	4260	N	VAL	C	87	92.117	52.981	13.362	1.000	20.25
ATOM	4261	CA	VAL	C	87	91.938	52.047	14.462	1.000	18.61
ATOM	4262	CB	VAL	C	87	93.281	51.429	14.889	1.000	25.48
ATOM	4263	CG1	VAL	C	87	93.126	50.625	16.171	1.000	24.24
ATOM	4264	CG2	VAL	C	87	93.843	50.546	13.778	1.000	23.75
ATOM	4265	C	VAL	C	87	91.309	52.749	15.661	1.000	23.53

ATOM	4266	O	VAL	C	87	91.644	53.890	15.975	1.000	24.10
ATOM	4267	N	ALA	C	88	90.396	52.044	16.322	1.000	22.81
ATOM	4268	CA	ALA	C	88	89.820	52.530	17.569	1.000	23.04
ATOM	4269	CB	ALA	C	88	88.371	52.947	17.406	1.000	19.18
ATOM	4270	C	ALA	C	88	89.957	51.435	18.628	1.000	26.02
ATOM	4271	O	ALA	C	88	89.630	50.275	18.361	1.000	26.64
ATOM	4272	N	VAL	C	89	90.447	51.822	19.803	1.000	22.97
ATOM	4273	CA	VAL	C	89	90.595	50.868	20.901	1.000	22.55
ATOM	4274	CB	VAL	C	89	92.063	50.633	21.292	1.000	26.76
ATOM	4275	CG1	VAL	C	89	92.157	49.550	22.359	1.000	22.89
ATOM	4276	CG2	VAL	C	89	92.899	50.249	20.077	1.000	21.77
ATOM	4277	C	VAL	C	89	89.831	51.369	22.125	1.000	19.84
ATOM	4278	O	VAL	C	89	90.222	52.384	22.700	1.000	21.07
ATOM	4279	N	ASN	C	90	88.770	50.668	22.508	1.000	18.37
ATOM	4280	CA	ASN	C	90	88.013	51.077	23.694	1.000	24.05
ATOM	4281	CB	ASN	C	90	86.560	50.599	23.584	1.000	21.08
ATOM	4282	CG	ASN	C	90	85.808	51.301	22.463	1.000	25.47
ATOM	4283	OD1	ASN	C	90	85.517	50.707	21.423	1.000	23.05
ATOM	4284	ND2	ASN	C	90	85.498	52.578	22.676	1.000	19.99
ATOM	4285	C	ASN	C	90	88.659	50.558	24.979	1.000	25.39
ATOM	4286	O	ASN	C	90	88.522	49.381	25.323	1.000	22.97
ATOM	4287	N	CYS	C	91	89.374	51.440	25.685	1.000	20.95
ATOM	4288	CA	CYS	C	91	89.929	51.040	26.976	1.000	24.57
ATOM	4289	CB	CYS	C	91	91.455	51.216	26.981	1.000	24.07
ATOM	4290	SG	CYS	C	91	92.321	49.981	25.961	1.000	24.05
ATOM	4291	C	CYS	C	91	89.304	51.806	28.136	1.000	24.51
ATOM	4292	O	CYS	C	91	89.453	51.395	29.290	1.000	23.54
ATOM	4293	N	ALA	C	92	88.606	52.908	27.884	1.000	23.37
ATOM	4294	CA	ALA	C	92	87.988	53.646	28.991	1.000	27.55
ATOM	4295	CB	ALA	C	92	87.234	54.856	28.466	1.000	16.49
ATOM	4296	C	ALA	C	92	87.063	52.747	29.808	1.000	30.67
ATOM	4297	O	ALA	C	92	86.174	52.068	29.271	1.000	22.30
ATOM	4298	N	GLY	C	93	87.263	52.718	31.131	1.000	24.95
ATOM	4299	CA	GLY	C	93	86.399	51.890	31.957	1.000	21.65
ATOM	4300	C	GLY	C	93	86.592	52.105	33.444	1.000	26.09
ATOM	4301	O	GLY	C	93	87.604	52.633	33.902	1.000	21.98
ATOM	4302	N	ILE	C	94	85.600	51.700	34.228	1.000	24.72
ATOM	4303	CA	ILE	C	94	85.639	51.835	35.682	1.000	20.97
ATOM	4304	CB	ILE	C	94	84.789	53.009	36.177	1.000	21.91
ATOM	4305	CG2	ILE	C	94	85.395	54.339	35.748	1.000	25.24
ATOM	4306	CG1	ILE	C	94	83.326	52.933	35.735	1.000	26.80
ATOM	4307	CD1	ILE	C	94	82.402	53.851	36.510	1.000	28.94
ATOM	4308	C	ILE	C	94	85.121	50.552	36.321	1.000	25.27
ATOM	4309	O	ILE	C	94	84.464	49.767	35.639	1.000	20.88
ATOM	4310	N	ALA	C	95	85.413	50.354	37.596	1.000	31.52
ATOM	4311	CA	ALA	C	95	85.032	49.161	38.336	1.000	31.13
ATOM	4312	CB	ALA	C	95	86.266	48.327	38.644	1.000	24.85
ATOM	4313	C	ALA	C	95	84.336	49.510	39.642	1.000	29.69
ATOM	4314	O	ALA	C	95	84.583	50.576	40.208	1.000	26.96
ATOM	4315	N	VAL	C	96	83.483	48.626	40.137	1.000	26.02
ATOM	4316	CA	VAL	C	96	82.972	48.747	41.493	1.000	24.18
ATOM	4317	CB	VAL	C	96	81.621	49.475	41.630	1.000	34.59
ATOM	4318	CG1	VAL	C	96	81.680	50.876	41.043	1.000	51.91
ATOM	4319	CG2	VAL	C	96	80.504	48.674	40.977	1.000	37.98
ATOM	4320	C	VAL	C	96	82.807	47.349	42.081	1.000	23.92
ATOM	4321	O	VAL	C	96	82.559	46.370	41.386	1.000	25.46
ATOM	4322	N	ALA	C	97	82.941	47.232	43.398	1.000	22.45
ATOM	4323	CA	ALA	C	97	82.609	45.956	44.034	1.000	18.77
ATOM	4324	CB	ALA	C	97	83.802	45.389	44.753	1.000	28.21
ATOM	4325	C	ALA	C	97	81.424	46.210	44.957	1.000	25.22
ATOM	4326	O	ALA	C	97	81.513	47.063	45.845	1.000	29.86

ATOM	4327	N	SER	C	98	80.327	45.506	44.731	1.000	23.38
ATOM	4328	CA	SER	C	98	79.141	45.722	45.577	1.000	25.77
ATOM	4329	CB	SER	C	98	78.519	47.070	45.248	1.000	24.89
ATOM	4330	OG	SER	C	98	77.352	47.382	45.971	1.000	22.27
ATOM	4331	C	SER	C	98	78.192	44.551	45.385	1.000	25.87
ATOM	4332	O	SER	C	98	77.767	44.267	44.262	1.000	21.71
ATOM	4333	N	LYS	C	99	77.878	43.851	46.468	1.000	19.96
ATOM	4334	CA	LYS	C	99	76.949	42.736	46.442	1.000	24.20
ATOM	4335	CB	LYS	C	99	76.821	42.103	47.829	1.000	25.97
ATOM	4336	CG	LYS	C	99	78.029	41.351	48.356	1.000	28.65
ATOM	4337	CD	LYS	C	99	77.583	40.149	49.176	1.000	31.25
ATOM	4338	CE	LYS	C	99	78.568	39.776	50.268	1.000	38.05
ATOM	4339	NZ	LYS	C	99	77.913	38.887	51.278	1.000	51.74
ATOM	4340	C	LYS	C	99	75.544	43.156	46.018	1.000	25.56
ATOM	4341	O	LYS	C	99	75.089	44.241	46.380	1.000	25.47
ATOM	4342	N	THR	C	100	74.855	42.300	45.278	1.000	21.51
ATOM	4343	CA	THR	C	100	73.478	42.560	44.866	1.000	17.21
ATOM	4344	CB	THR	C	100	72.898	41.354	44.112	1.000	22.90
ATOM	4345	OG1	THR	C	100	73.639	41.178	42.892	1.000	24.84
ATOM	4346	CG2	THR	C	100	71.440	41.604	43.740	1.000	23.05
ATOM	4347	C	THR	C	100	72.596	42.860	46.076	1.000	23.89
ATOM	4348	O	THR	C	100	71.833	43.819	46.092	1.000	22.63
ATOM	4349	N	TYR	C	101	72.737	42.017	47.093	1.000	23.56
ATOM	4350	CA	TYR	C	101	72.063	42.148	48.366	1.000	23.20
ATOM	4351	CB	TYR	C	101	70.660	41.516	48.343	1.000	20.29
ATOM	4352	CG	TYR	C	101	69.964	41.701	49.688	1.000	25.09
ATOM	4353	CD1	TYR	C	101	69.746	40.620	50.525	1.000	25.63
ATOM	4354	CE1	TYR	C	101	69.122	40.784	51.744	1.000	29.97
ATOM	4355	CD2	TYR	C	101	69.550	42.958	50.107	1.000	27.65
ATOM	4356	CE2	TYR	C	101	68.920	43.133	51.330	1.000	31.37
ATOM	4357	CZ	TYR	C	101	68.711	42.037	52.143	1.000	32.86
ATOM	4358	OH	TYR	C	101	68.089	42.179	53.362	1.000	34.12
ATOM	4359	C	TYR	C	101	72.892	41.502	49.476	1.000	27.30
ATOM	4360	O	TYR	C	101	73.412	40.404	49.274	1.000	25.60
ATOM	4361	N	ASN	C	102	73.006	42.164	50.622	1.000	29.43
ATOM	4362	CA	ASN	C	102	73.716	41.595	51.770	1.000	28.87
ATOM	4363	CB	ASN	C	102	74.869	42.506	52.184	1.000	30.71
ATOM	4364	CG	ASN	C	102	75.751	41.924	53.273	1.000	34.19
ATOM	4365	OD1	ASN	C	102	75.292	41.152	54.113	1.000	33.00
ATOM	4366	ND2	ASN	C	102	77.031	42.283	53.289	1.000	23.49
ATOM	4367	C	ASN	C	102	72.762	41.379	52.941	1.000	24.06
ATOM	4368	O	ASN	C	102	72.368	42.358	53.583	1.000	28.89
ATOM	4369	N	LEU	C	103	72.388	40.138	53.225	1.000	24.08
ATOM	4370	CA	LEU	C	103	71.398	39.899	54.278	1.000	30.00
ATOM	4371	CB	LEU	C	103	70.947	38.441	54.299	1.000	28.45
ATOM	4372	CG	LEU	C	103	69.917	38.042	55.361	1.000	32.39
ATOM	4373	CD1	LEU	C	103	68.610	38.804	55.196	1.000	33.98
ATOM	4374	CD2	LEU	C	103	69.651	36.543	55.326	1.000	25.45
ATOM	4375	C	LEU	C	103	71.933	40.322	55.646	1.000	35.26
ATOM	4376	O	LEU	C	103	71.299	41.113	56.348	1.000	38.65
ATOM	4377	N	LYS	C	104	73.090	39.802	56.024	1.000	39.01
ATOM	4378	CA	LYS	C	104	73.708	40.104	57.306	1.000	41.66
ATOM	4379	CB	LYS	C	104	75.103	39.498	57.386	1.000	47.98
ATOM	4380	C	LYS	C	104	73.770	41.607	57.562	1.000	38.16
ATOM	4381	O	LYS	C	104	73.509	42.058	58.678	1.000	44.94
ATOM	4382	N	LYS	C	105	74.103	42.377	56.534	1.000	32.61
ATOM	4383	CA	LYS	C	105	74.220	43.824	56.663	1.000	33.58
ATOM	4384	CB	LYS	C	105	75.308	44.376	55.741	1.000	40.90
ATOM	4385	CG	LYS	C	105	76.696	44.469	56.339	1.000	51.19
ATOM	4386	CD	LYS	C	105	77.585	45.413	55.548	1.000	62.16
ATOM	4387	CE	LYS	C	105	76.859	46.019	54.356	1.000	69.04

ATOM	4388	NZ	LYS	C	105	77.114	47.481	54.221	1.000	70.89
ATOM	4389	C	LYS	C	105	72.908	44.517	56.323	1.000	30.56
ATOM	4390	O	LYS	C	105	72.767	45.726	56.514	1.000	30.90
ATOM	4391	N	GLY	C	106	71.950	43.761	55.790	1.000	26.43
ATOM	4392	CA	GLY	C	106	70.712	44.375	55.311	1.000	27.03
ATOM	4393	C	GLY	C	106	71.008	45.502	54.337	1.000	27.69
ATOM	4394	O	GLY	C	106	70.444	46.595	54.418	1.000	32.58
ATOM	4395	N	GLN	C	107	71.925	45.261	53.399	1.000	29.25
ATOM	4396	CA	GLN	C	107	72.291	46.325	52.464	1.000	29.86
ATOM	4397	CB	GLN	C	107	73.738	46.748	52.653	1.000	28.35
ATOM	4398	C	GLN	C	107	72.049	45.893	51.016	1.000	29.83
ATOM	4399	O	GLN	C	107	72.332	44.747	50.660	1.000	25.04
ATOM	4400	N	THR	C	108	71.525	46.830	50.239	1.000	27.41
ATOM	4401	CA	THR	C	108	71.163	46.631	48.847	1.000	28.51
ATOM	4402	CB	THR	C	108	69.712	47.082	48.588	1.000	26.57
ATOM	4403	OG1	THR	C	108	68.811	46.331	49.402	1.000	23.48
ATOM	4404	CG2	THR	C	108	69.313	46.770	47.151	1.000	26.36
ATOM	4405	C	THR	C	108	72.078	47.398	47.899	1.000	22.28
ATOM	4406	O	THR	C	108	72.327	48.582	48.122	1.000	21.53
ATOM	4407	N	HIS	C	109	72.564	46.729	46.859	1.000	25.01
ATOM	4408	CA	HIS	C	109	73.295	47.402	45.783	1.000	22.12
ATOM	4409	CB	HIS	C	109	73.530	46.456	44.612	1.000	23.18
ATOM	4410	CG	HIS	C	109	74.490	46.905	43.558	1.000	21.71
ATOM	4411	CD2	HIS	C	109	75.506	46.241	42.955	1.000	22.92
ATOM	4412	ND1	HIS	C	109	74.482	48.155	42.986	1.000	20.66
ATOM	4413	CE1	HIS	C	109	75.447	48.248	42.084	1.000	21.46
ATOM	4414	NE2	HIS	C	109	76.089	47.098	42.044	1.000	21.40
ATOM	4415	C	HIS	C	109	72.508	48.624	45.334	1.000	20.47
ATOM	4416	O	HIS	C	109	71.301	48.553	45.084	1.000	25.75
ATOM	4417	N	THR	C	110	73.153	49.786	45.235	1.000	20.46
ATOM	4418	CA	THR	C	110	72.348	50.934	44.829	1.000	21.09
ATOM	4419	CB	THR	C	110	72.993	52.284	45.189	1.000	22.39
ATOM	4420	OG1	THR	C	110	74.177	52.416	44.393	1.000	24.12
ATOM	4421	CG2	THR	C	110	73.375	52.322	46.661	1.000	20.02
ATOM	4422	C	THR	C	110	72.118	50.930	43.325	1.000	24.72
ATOM	4423	O	THR	C	110	72.919	50.413	42.558	1.000	29.03
ATOM	4424	N	LEU	C	111	71.002	51.524	42.921	1.000	25.48
ATOM	4425	CA	LEU	C	111	70.718	51.623	41.495	1.000	24.76
ATOM	4426	CB	LEU	C	111	69.317	52.216	41.309	1.000	25.46
ATOM	4427	CG	LEU	C	111	68.749	52.087	39.890	1.000	25.35
ATOM	4428	CD1	LEU	C	111	68.710	50.626	39.469	1.000	22.50
ATOM	4429	CD2	LEU	C	111	67.374	52.735	39.816	1.000	27.56
ATOM	4430	C	LEU	C	111	71.772	52.457	40.786	1.000	25.44
ATOM	4431	O	LEU	C	111	72.270	52.101	39.719	1.000	23.31
ATOM	4432	N	GLU	C	112	72.163	53.605	41.348	1.000	25.18
ATOM	4433	CA	GLU	C	112	73.093	54.443	40.590	1.000	31.68
ATOM	4434	CB	GLU	C	112	73.186	55.837	41.215	1.000	41.48
ATOM	4435	CG	GLU	C	112	72.266	56.860	40.577	1.000	58.29
ATOM	4436	CD	GLU	C	112	71.704	56.498	39.220	1.000	62.69
ATOM	4437	OE1	GLU	C	112	72.217	57.028	38.204	1.000	56.30
ATOM	4438	OE2	GLU	C	112	70.738	55.700	39.142	1.000	39.60
ATOM	4439	C	GLU	C	112	74.479	53.821	40.454	1.000	29.28
ATOM	4440	O	GLU	C	112	75.175	54.140	39.479	1.000	21.19
ATOM	4441	N	ASP	C	113	74.898	52.960	41.375	1.000	26.57
ATOM	4442	CA	ASP	C	113	76.177	52.263	41.200	1.000	24.79
ATOM	4443	CB	ASP	C	113	76.544	51.445	42.428	1.000	24.71
ATOM	4444	CG	ASP	C	113	77.406	52.158	43.439	1.000	26.72
ATOM	4445	OD1	ASP	C	113	78.053	53.164	43.098	1.000	25.92
ATOM	4446	OD2	ASP	C	113	77.449	51.724	44.608	1.000	30.58
ATOM	4447	C	ASP	C	113	76.101	51.338	39.986	1.000	21.47
ATOM	4448	O	ASP	C	113	77.048	51.172	39.224	1.000	26.34

ATOM	4449	N	PHE	C	114	74.942	50.711	39.794	1.000	19.80
ATOM	4450	CA	PHE	C	114	74.759	49.855	38.624	1.000	21.89
ATOM	4451	CB	PHE	C	114	73.493	49.015	38.774	1.000	21.43
ATOM	4452	CG	PHE	C	114	73.344	47.960	37.684	1.000	22.40
ATOM	4453	CD1	PHE	C	114	72.610	48.247	36.541	1.000	22.43
ATOM	4454	CD2	PHE	C	114	73.933	46.719	37.817	1.000	18.60
ATOM	4455	CE1	PHE	C	114	72.485	47.298	35.551	1.000	21.11
ATOM	4456	CE2	PHE	C	114	73.803	45.764	36.826	1.000	23.20
ATOM	4457	CZ	PHE	C	114	73.068	46.053	35.693	1.000	16.97
ATOM	4458	C	PHE	C	114	74.702	50.692	37.346	1.000	22.83
ATOM	4459	O	PHE	C	114	75.297	50.331	36.333	1.000	25.15
ATOM	4460	N	GLN	C	115	73.991	51.808	37.403	1.000	21.70
ATOM	4461	CA	GLN	C	115	73.818	52.709	36.281	1.000	26.11
ATOM	4462	CB	GLN	C	115	72.795	53.799	36.630	1.000	26.45
ATOM	4463	CG	GLN	C	115	72.395	54.654	35.434	1.000	30.61
ATOM	4464	CD	GLN	C	115	71.550	53.875	34.441	1.000	33.27
ATOM	4465	OE1	GLN	C	115	70.493	53.348	34.790	1.000	33.80
ATOM	4466	NE2	GLN	C	115	72.024	53.798	33.202	1.000	30.59
ATOM	4467	C	GLN	C	115	75.117	53.375	35.839	1.000	26.35
ATOM	4468	O	GLN	C	115	75.372	53.460	34.632	1.000	28.81
ATOM	4469	N	ARG	C	116	75.923	53.849	36.784	1.000	19.66
ATOM	4470	CA	ARG	C	116	77.158	54.545	36.427	1.000	21.15
ATOM	4471	CB	ARG	C	116	77.751	55.189	37.675	1.000	26.20
ATOM	4472	C	ARG	C	116	78.179	53.619	35.783	1.000	22.02
ATOM	4473	O	ARG	C	116	78.970	53.981	34.907	1.000	24.22
ATOM	4474	N	VAL	C	117	78.204	52.359	36.213	1.000	21.35
ATOM	4475	CA	VAL	C	117	79.119	51.397	35.597	1.000	20.76
ATOM	4476	CB	VAL	C	117	79.266	50.152	36.481	1.000	21.27
ATOM	4477	CG1	VAL	C	117	79.904	49.002	35.725	1.000	19.89
ATOM	4478	CG2	VAL	C	117	80.101	50.504	37.711	1.000	26.91
ATOM	4479	C	VAL	C	117	78.649	51.028	34.196	1.000	21.72
ATOM	4480	O	VAL	C	117	79.461	50.885	33.281	1.000	27.53
ATOM	4481	N	LEU	C	118	77.347	50.875	34.001	1.000	21.28
ATOM	4482	CA	LEU	C	118	76.767	50.593	32.699	1.000	22.07
ATOM	4483	CB	LEU	C	118	75.257	50.445	32.813	1.000	22.40
ATOM	4484	CG	LEU	C	118	74.619	49.086	33.041	1.000	34.91
ATOM	4485	CD1	LEU	C	118	73.187	49.096	32.499	1.000	33.59
ATOM	4486	CD2	LEU	C	118	75.415	47.952	32.414	1.000	37.45
ATOM	4487	C	LEU	C	118	77.062	51.715	31.693	1.000	25.15
ATOM	4488	O	LEU	C	118	77.454	51.474	30.554	1.000	22.17
ATOM	4489	N	ASP	C	119	76.840	52.945	32.142	1.000	25.17
ATOM	4490	CA	ASP	C	119	77.042	54.136	31.331	1.000	23.07
ATOM	4491	CB	ASP	C	119	76.673	55.397	32.119	1.000	21.46
ATOM	4492	CG	ASP	C	119	75.171	55.573	32.250	1.000	24.19
ATOM	4493	OD1	ASP	C	119	74.732	56.626	32.757	1.000	35.16
ATOM	4494	OD2	ASP	C	119	74.428	54.649	31.852	1.000	26.39
ATOM	4495	C	ASP	C	119	78.473	54.263	30.817	1.000	30.13
ATOM	4496	O	ASP	C	119	78.692	54.440	29.608	1.000	22.50
ATOM	4497	N	VAL	C	120	79.466	54.183	31.709	1.000	24.43
ATOM	4498	CA	VAL	C	120	80.837	54.384	31.223	1.000	22.41
ATOM	4499	CB	VAL	C	120	81.829	54.644	32.372	1.000	23.24
ATOM	4500	CG1	VAL	C	120	83.263	54.680	31.870	1.000	22.29
ATOM	4501	CG2	VAL	C	120	81.508	55.957	33.077	1.000	24.06
ATOM	4502	C	VAL	C	120	81.316	53.194	30.406	1.000	17.91
ATOM	4503	O	VAL	C	120	81.848	53.385	29.305	1.000	26.22
ATOM	4504	N	ASN	C	121	81.146	51.974	30.908	1.000	13.92
ATOM	4505	CA	ASN	C	121	81.797	50.821	30.295	1.000	18.63
ATOM	4506	CB	ASN	C	121	81.877	49.626	31.250	1.000	20.72
ATOM	4507	CG	ASN	C	121	82.729	49.879	32.474	1.000	24.64
ATOM	4508	OD1	ASN	C	121	83.339	50.939	32.605	1.000	23.75
ATOM	4509	ND2	ASN	C	121	82.776	48.902	33.373	1.000	21.68

ATOM	4510	C	ASN	C	121	81.108	50.345	29.023	1.000	19.66
ATOM	4511	O	ASN	C	121	81.782	49.961	28.060	1.000	22.39
ATOM	4512	N	LEU	C	122	79.784	50.343	29.034	1.000	21.72
ATOM	4513	CA	LEU	C	122	79.019	49.750	27.940	1.000	18.43
ATOM	4514	CB	LEU	C	122	77.882	48.904	28.508	1.000	17.19
ATOM	4515	CG	LEU	C	122	76.918	48.259	27.511	1.000	21.34
ATOM	4516	CD1	LEU	C	122	77.683	47.507	26.435	1.000	18.33
ATOM	4517	CD2	LEU	C	122	75.938	47.348	28.237	1.000	16.15
ATOM	4518	C	LEU	C	122	78.500	50.817	26.990	1.000	21.38
ATOM	4519	O	LEU	C	122	78.807	50.810	25.796	1.000	28.84
ATOM	4520	N	MET	C	123	77.706	51.739	27.510	1.000	19.47
ATOM	4521	CA	MET	C	123	77.180	52.834	26.709	1.000	21.09
ATOM	4522	CB	MET	C	123	76.191	53.662	27.528	1.000	23.37
ATOM	4523	CG	MET	C	123	75.557	54.811	26.761	1.000	25.26
ATOM	4524	SD	MET	C	123	76.474	56.352	26.889	1.000	27.76
ATOM	4525	CE	MET	C	123	76.109	56.826	28.585	1.000	24.30
ATOM	4526	C	MET	C	123	78.311	53.710	26.186	1.000	26.12
ATOM	4527	O	MET	C	123	78.294	54.131	25.026	1.000	27.11
ATOM	4528	N	GLY	C	124	79.294	53.998	27.025	1.000	23.16
ATOM	4529	CA	GLY	C	124	80.457	54.773	26.620	1.000	24.75
ATOM	4530	C	GLY	C	124	81.211	54.112	25.479	1.000	26.45
ATOM	4531	O	GLY	C	124	81.589	54.753	24.500	1.000	23.18
ATOM	4532	N	THR	C	125	81.440	52.807	25.577	1.000	22.27
ATOM	4533	CA	THR	C	125	82.099	52.096	24.480	1.000	20.93
ATOM	4534	CB	THR	C	125	82.436	50.653	24.889	1.000	21.42
ATOM	4535	OG1	THR	C	125	83.661	50.663	25.648	1.000	21.32
ATOM	4536	CG2	THR	C	125	82.677	49.761	23.677	1.000	21.31
ATOM	4537	C	THR	C	125	81.232	52.132	23.227	1.000	22.04
ATOM	4538	O	THR	C	125	81.731	52.449	22.141	1.000	22.04
ATOM	4539	N	PHE	C	126	79.938	51.849	23.321	1.000	22.32
ATOM	4540	CA	PHE	C	126	79.086	51.916	22.134	1.000	23.46
ATOM	4541	CB	PHE	C	126	77.644	51.478	22.431	1.000	17.51
ATOM	4542	CG	PHE	C	126	76.778	51.434	21.177	1.000	26.11
ATOM	4543	CD1	PHE	C	126	76.857	50.374	20.293	1.000	22.75
ATOM	4544	CD2	PHE	C	126	75.888	52.458	20.889	1.000	28.36
ATOM	4545	CE1	PHE	C	126	76.083	50.328	19.149	1.000	17.53
ATOM	4546	CE2	PHE	C	126	75.108	52.433	19.749	1.000	23.72
ATOM	4547	CZ	PHE	C	126	75.205	51.364	18.876	1.000	21.00
ATOM	4548	C	PHE	C	126	79.066	53.322	21.541	1.000	23.15
ATOM	4549	O	PHE	C	126	79.013	53.494	20.317	1.000	21.11
ATOM	4550	N	ASN	C	127	79.106	54.356	22.373	1.000	18.49
ATOM	4551	CA	ASN	C	127	79.088	55.727	21.869	1.000	23.03
ATOM	4552	CB	ASN	C	127	79.101	56.743	23.008	1.000	21.45
ATOM	4553	CG	ASN	C	127	78.811	58.157	22.556	1.000	25.25
ATOM	4554	OD1	ASN	C	127	78.014	58.378	21.642	1.000	29.13
ATOM	4555	ND2	ASN	C	127	79.444	59.142	23.178	1.000	21.91
ATOM	4556	C	ASN	C	127	80.275	55.975	20.937	1.000	25.87
ATOM	4557	O	ASN	C	127	80.132	56.542	19.855	1.000	28.62
ATOM	4558	N	VAL	C	128	81.462	55.550	21.358	1.000	24.08
ATOM	4559	CA	VAL	C	128	82.651	55.701	20.526	1.000	21.95
ATOM	4560	CB	VAL	C	128	83.914	55.317	21.317	1.000	26.51
ATOM	4561	CG1	VAL	C	128	85.134	55.394	20.406	1.000	22.25
ATOM	4562	CG2	VAL	C	128	84.064	56.225	22.528	1.000	22.93
ATOM	4563	C	VAL	C	128	82.555	54.854	19.264	1.000	23.58
ATOM	4564	O	VAL	C	128	82.918	55.250	18.153	1.000	25.79
ATOM	4565	N	ILE	C	129	82.028	53.643	19.408	1.000	20.57
ATOM	4566	CA	ILE	C	129	81.911	52.748	18.263	1.000	20.61
ATOM	4567	CB	ILE	C	129	81.347	51.377	18.686	1.000	19.62
ATOM	4568	CG2	ILE	C	129	80.846	50.638	17.458	1.000	17.68
ATOM	4569	CG1	ILE	C	129	82.345	50.542	19.491	1.000	18.07
ATOM	4570	CD1	ILE	C	129	81.885	49.185	19.946	1.000	14.79

ATOM	4571	C	ILE	C	129	81.046	53.324	17.151	1.000	25.58
ATOM	4572	O	ILE	C	129	81.456	53.326	15.982	1.000	24.80
ATOM	4573	N	ARG	C	130	79.849	53.789	17.487	1.000	22.22
ATOM	4574	CA	ARG	C	130	78.908	54.263	16.478	1.000	22.61
ATOM	4575	CB	ARG	C	130	77.534	54.507	17.124	1.000	24.83
ATOM	4576	CG	ARG	C	130	77.407	55.858	17.785	1.000	20.11
ATOM	4577	CD	ARG	C	130	76.273	56.001	18.789	1.000	22.05
ATOM	4578	NE	ARG	C	130	76.439	57.318	19.415	1.000	27.62
ATOM	4579	CZ	ARG	C	130	75.884	58.453	19.041	1.000	24.47
ATOM	4580	NH1	ARG	C	130	76.165	59.557	19.720	1.000	23.28
ATOM	4581	NH2	ARG	C	130	75.054	58.521	18.014	1.000	20.98
ATOM	4582	C	ARG	C	130	79.421	55.523	15.796	1.000	27.40
ATOM	4583	O	ARG	C	130	79.228	55.740	14.594	1.000	23.73
ATOM	4584	N	LEU	C	131	80.103	56.372	16.567	1.000	23.20
ATOM	4585	CA	LEU	C	131	80.646	57.606	16.013	1.000	26.88
ATOM	4586	CB	LEU	C	131	80.905	58.629	17.127	1.000	23.30
ATOM	4587	CG	LEU	C	131	79.654	59.282	17.728	1.000	28.73
ATOM	4588	CD1	LEU	C	131	79.998	60.155	18.926	1.000	20.58
ATOM	4589	CD2	LEU	C	131	78.925	60.105	16.673	1.000	33.54
ATOM	4590	C	LEU	C	131	81.917	57.344	15.213	1.000	29.94
ATOM	4591	O	LEU	C	131	82.072	57.881	14.115	1.000	25.36
ATOM	4592	N	VAL	C	132	82.834	56.531	15.740	1.000	22.06
ATOM	4593	CA	VAL	C	132	84.060	56.279	14.987	1.000	19.86
ATOM	4594	CB	VAL	C	132	85.144	55.586	15.823	1.000	20.83
ATOM	4595	CG1	VAL	C	132	84.951	54.087	15.879	1.000	20.03
ATOM	4596	CG2	VAL	C	132	86.517	55.930	15.238	1.000	23.88
ATOM	4597	C	VAL	C	132	83.760	55.452	13.735	1.000	22.63
ATOM	4598	O	VAL	C	132	84.474	55.583	12.735	1.000	26.93
ATOM	4599	N	ALA	C	133	82.711	54.633	13.750	1.000	16.38
ATOM	4600	CA	ALA	C	133	82.362	53.861	12.560	1.000	22.93
ATOM	4601	CB	ALA	C	133	81.248	52.865	12.849	1.000	23.49
ATOM	4602	C	ALA	C	133	81.967	54.783	11.408	1.000	25.68
ATOM	4603	O	ALA	C	133	82.304	54.533	10.248	1.000	25.79
ATOM	4604	N	GLY	C	134	81.258	55.870	11.697	1.000	26.27
ATOM	4605	CA	GLY	C	134	80.967	56.883	10.693	1.000	29.86
ATOM	4606	C	GLY	C	134	82.235	57.527	10.168	1.000	35.29
ATOM	4607	O	GLY	C	134	82.350	57.894	8.995	1.000	32.90
ATOM	4608	N	GLU	C	135	83.254	57.680	11.022	1.000	33.22
ATOM	4609	CA	GLU	C	135	84.500	58.252	10.509	1.000	27.55
ATOM	4610	CB	GLU	C	135	85.392	58.749	11.645	1.000	27.14
ATOM	4611	CG	GLU	C	135	84.779	59.910	12.415	1.000	31.58
ATOM	4612	CD	GLU	C	135	84.524	61.133	11.549	1.000	34.25
ATOM	4613	OE1	GLU	C	135	83.509	61.813	11.805	1.000	48.00
ATOM	4614	OE2	GLU	C	135	85.313	61.402	10.623	1.000	44.39
ATOM	4615	C	GLU	C	135	85.249	57.245	9.654	1.000	27.65
ATOM	4616	O	GLU	C	135	85.776	57.596	8.595	1.000	31.08
ATOM	4617	N	MET	C	136	85.293	55.991	10.094	1.000	20.13
ATOM	4618	CA	MET	C	136	85.986	55.000	9.275	1.000	22.80
ATOM	4619	CB	MET	C	136	86.163	53.693	10.043	1.000	24.93
ATOM	4620	CG	MET	C	136	87.064	53.805	11.266	1.000	26.00
ATOM	4621	SD	MET	C	136	87.004	52.294	12.257	1.000	26.60
ATOM	4622	CE	MET	C	136	88.201	52.656	13.540	1.000	25.70
ATOM	4623	C	MET	C	136	85.225	54.755	7.978	1.000	21.26
ATOM	4624	O	MET	C	136	85.756	54.286	6.973	1.000	26.59
ATOM	4625	N	GLY	C	137	83.936	55.076	7.981	1.000	26.75
ATOM	4626	CA	GLY	C	137	83.143	54.888	6.766	1.000	31.17
ATOM	4627	C	GLY	C	137	83.660	55.747	5.622	1.000	33.76
ATOM	4628	O	GLY	C	137	83.484	55.416	4.447	1.000	32.88
ATOM	4629	N	GLN	C	138	84.303	56.859	5.974	1.000	27.37
ATOM	4630	CA	GLN	C	138	84.791	57.797	4.973	1.000	28.73
ATOM	4631	CB	GLN	C	138	84.859	59.194	5.578	1.000	32.69

ATOM	4632	C	GLN	C	138	86.141	57.384	4.411	1.000	32.99
ATOM	4633	O	GLN	C	138	86.671	58.018	3.497	1.000	36.53
ATOM	4634	N	ASN	C	139	86.745	56.324	4.942	1.000	31.67
ATOM	4635	CA	ASN	C	139	88.056	55.934	4.429	1.000	30.49
ATOM	4636	CB	ASN	C	139	88.847	55.085	5.419	1.000	31.45
ATOM	4637	CG	ASN	C	139	89.086	55.684	6.785	1.000	34.68
ATOM	4638	OD1	ASN	C	139	89.055	56.894	7.000	1.000	33.74
ATOM	4639	ND2	ASN	C	139	89.334	54.812	7.762	1.000	28.28
ATOM	4640	C	ASN	C	139	87.884	55.142	3.136	1.000	30.33
ATOM	4641	O	ASN	C	139	86.907	54.415	2.977	1.000	31.18
ATOM	4642	N	GLU	C	140	88.838	55.260	2.219	1.000	32.41
ATOM	4643	CA	GLU	C	140	88.838	54.364	1.063	1.000	33.47
ATOM	4644	CB	GLU	C	140	89.741	54.885	-0.038	1.000	36.95
ATOM	4645	C	GLU	C	140	89.274	52.976	1.528	1.000	33.19
ATOM	4646	O	GLU	C	140	90.249	52.875	2.283	1.000	30.54
ATOM	4647	N	PRO	C	141	88.575	51.929	1.111	1.000	30.85
ATOM	4648	CD	PRO	C	141	87.385	51.919	0.252	1.000	28.75
ATOM	4649	CA	PRO	C	141	88.970	50.578	1.528	1.000	31.41
ATOM	4650	CB	PRO	C	141	87.893	49.670	0.942	1.000	31.98
ATOM	4651	CG	PRO	C	141	86.781	50.569	0.534	1.000	33.28
ATOM	4652	C	PRO	C	141	90.330	50.204	0.948	1.000	37.57
ATOM	4653	O	PRO	C	141	90.625	50.524	-0.205	1.000	39.30
ATOM	4654	N	ASP	C	142	91.151	49.522	1.745	1.000	32.93
ATOM	4655	CA	ASP	C	142	92.444	49.095	1.212	1.000	31.17
ATOM	4656	CB	ASP	C	142	93.376	48.639	2.322	1.000	32.74
ATOM	4657	CG	ASP	C	142	92.888	47.444	3.108	1.000	34.79
ATOM	4658	OD1	ASP	C	142	91.946	46.748	2.677	1.000	23.82
ATOM	4659	OD2	ASP	C	142	93.479	47.192	4.185	1.000	36.00
ATOM	4660	C	ASP	C	142	92.223	47.986	0.182	1.000	35.49
ATOM	4661	O	ASP	C	142	91.079	47.730	-0.205	1.000	28.21
ATOM	4662	N	GLN	C	143	93.321	47.372	-0.234	1.000	34.68
ATOM	4663	CA	GLN	C	143	93.292	46.328	-1.248	1.000	38.05
ATOM	4664	CB	GLN	C	143	94.716	45.927	-1.617	1.000	37.56
ATOM	4665	C	GLN	C	143	92.502	45.115	-0.776	1.000	39.79
ATOM	4666	O	GLN	C	143	92.057	44.304	-1.596	1.000	39.29
ATOM	4667	N	GLY	C	144	92.336	44.982	0.539	1.000	34.34
ATOM	4668	CA	GLY	C	144	91.609	43.857	1.105	1.000	30.14
ATOM	4669	C	GLY	C	144	90.163	44.224	1.396	1.000	30.98
ATOM	4670	O	GLY	C	144	89.417	43.410	1.939	1.000	33.23
ATOM	4671	N	GLY	C	145	89.767	45.439	1.035	1.000	28.94
ATOM	4672	CA	GLY	C	145	88.407	45.893	1.253	1.000	24.37
ATOM	4673	C	GLY	C	145	88.236	46.543	2.603	1.000	26.97
ATOM	4674	O	GLY	C	145	87.132	46.942	2.981	1.000	25.24
ATOM	4675	N	GLN	C	146	89.310	46.676	3.378	1.000	28.50
ATOM	4676	CA	GLN	C	146	89.168	47.169	4.746	1.000	27.93
ATOM	4677	CB	GLN	C	146	90.248	46.534	5.635	1.000	27.83
ATOM	4678	CG	GLN	C	146	89.994	46.739	7.126	1.000	30.00
ATOM	4679	CD	GLN	C	146	90.976	45.937	7.966	1.000	29.61
ATOM	4680	OE1	GLN	C	146	90.812	44.731	8.172	1.000	27.76
ATOM	4681	NE2	GLN	C	146	92.007	46.631	8.437	1.000	24.62
ATOM	4682	C	GLN	C	146	89.249	48.685	4.869	1.000	27.94
ATOM	4683	O	GLN	C	146	90.091	49.343	4.260	1.000	30.22
ATOM	4684	N	ARG	C	147	88.364	49.237	5.689	1.000	22.37
ATOM	4685	CA	ARG	C	147	88.337	50.649	6.015	1.000	21.86
ATOM	4686	CB	ARG	C	147	86.936	51.211	5.751	1.000	21.94
ATOM	4687	CG	ARG	C	147	86.559	51.337	4.277	1.000	23.66
ATOM	4688	CD	ARG	C	147	85.272	52.142	4.189	1.000	28.50
ATOM	4689	NE	ARG	C	147	84.833	52.483	2.843	1.000	29.48
ATOM	4690	CZ	ARG	C	147	83.997	51.726	2.144	1.000	30.36
ATOM	4691	NH1	ARG	C	147	83.625	52.086	0.927	1.000	40.21
ATOM	4692	NH2	ARG	C	147	83.528	50.599	2.656	1.000	30.57

ATOM	4693	C	ARG	C	147	88.704	50.934	7.468	1.000	23.83
ATOM	4694	O	ARG	C	147	89.023	52.084	7.799	1.000	21.61
ATOM	4695	N	GLY	C	148	88.657	49.944	8.359	1.000	23.27
ATOM	4696	CA	GLY	C	148	88.977	50.241	9.754	1.000	22.95
ATOM	4697	C	GLY	C	148	88.910	49.030	10.663	1.000	23.86
ATOM	4698	O	GLY	C	148	88.404	47.983	10.263	1.000	23.15
ATOM	4699	N	VAL	C	149	89.433	49.170	11.880	1.000	21.41
ATOM	4700	CA	VAL	C	149	89.438	48.111	12.873	1.000	21.07
ATOM	4701	CB	VAL	C	149	90.815	47.434	13.047	1.000	24.01
ATOM	4702	CG1	VAL	C	149	90.663	46.155	13.860	1.000	25.18
ATOM	4703	CG2	VAL	C	149	91.461	47.147	11.702	1.000	31.46
ATOM	4704	C	VAL	C	149	89.015	48.660	14.236	1.000	21.87
ATOM	4705	O	VAL	C	149	89.573	49.650	14.719	1.000	22.20
ATOM	4706	N	ILE	C	150	88.036	48.009	14.854	1.000	21.29
ATOM	4707	CA	ILE	C	150	87.581	48.459	16.177	1.000	22.11
ATOM	4708	CB	ILE	C	150	86.120	48.928	16.138	1.000	23.77
ATOM	4709	CG2	ILE	C	150	85.599	49.309	17.516	1.000	22.27
ATOM	4710	CG1	ILE	C	150	85.895	50.080	15.154	1.000	22.12
ATOM	4711	CD1	ILE	C	150	84.436	50.412	14.925	1.000	22.79
ATOM	4712	C	ILE	C	150	87.781	47.333	17.185	1.000	21.41
ATOM	4713	O	ILE	C	150	87.392	46.194	16.955	1.000	23.38
ATOM	4714	N	ILE	C	151	88.421	47.652	18.294	1.000	20.58
ATOM	4715	CA	ILE	C	151	88.771	46.712	19.354	1.000	21.20
ATOM	4716	CB	ILE	C	151	90.297	46.547	19.456	1.000	19.12
ATOM	4717	CG2	ILE	C	151	90.718	45.602	20.566	1.000	16.71
ATOM	4718	CG1	ILE	C	151	90.934	46.101	18.134	1.000	24.71
ATOM	4719	CD1	ILE	C	151	92.445	46.052	18.169	1.000	24.82
ATOM	4720	C	ILE	C	151	88.203	47.214	20.680	1.000	21.43
ATOM	4721	O	ILE	C	151	88.441	48.370	21.032	1.000	23.16
ATOM	4722	N	ASN	C	152	87.456	46.374	21.384	1.000	19.89
ATOM	4723	CA	ASN	C	152	86.858	46.780	22.658	1.000	20.31
ATOM	4724	CB	ASN	C	152	85.338	46.577	22.645	1.000	18.41
ATOM	4725	CG	ASN	C	152	84.762	47.031	21.311	1.000	17.45
ATOM	4726	OD1	ASN	C	152	84.199	46.232	20.564	1.000	34.00
ATOM	4727	ND2	ASN	C	152	84.929	48.310	21.028	1.000	15.97
ATOM	4728	C	ASN	C	152	87.458	45.995	23.816	1.000	22.13
ATOM	4729	O	ASN	C	152	88.053	44.942	23.593	1.000	19.05
ATOM	4730	N	THR	C	153	87.298	46.505	25.036	1.000	22.52
ATOM	4731	CA	THR	C	153	87.802	45.768	26.192	1.000	19.48
ATOM	4732	CB	THR	C	153	88.770	46.586	27.056	1.000	19.67
ATOM	4733	OG1	THR	C	153	89.765	47.237	26.247	1.000	20.53
ATOM	4734	CG2	THR	C	153	89.519	45.635	27.984	1.000	18.55
ATOM	4735	C	THR	C	153	86.647	45.286	27.065	1.000	19.43
ATOM	4736	O	THR	C	153	85.923	46.104	27.629	1.000	19.18
ATOM	4737	N	ALA	C	154	86.504	43.967	27.145	1.000	17.96
ATOM	4738	CA	ALA	C	154	85.546	43.388	28.091	1.000	23.21
ATOM	4739	CB	ALA	C	154	84.783	42.231	27.479	1.000	16.13
ATOM	4740	C	ALA	C	154	86.313	42.982	29.354	1.000	17.34
ATOM	4741	O	ALA	C	154	87.034	43.830	29.893	1.000	20.75
ATOM	4742	N	SER	C	155	86.155	41.747	29.783	1.000	20.86
ATOM	4743	CA	SER	C	155	86.764	41.215	30.997	1.000	18.50
ATOM	4744	CB	SER	C	155	86.326	42.008	32.231	1.000	20.65
ATOM	4745	OG	SER	C	155	86.621	41.304	33.431	1.000	19.32
ATOM	4746	C	SER	C	155	86.363	39.764	31.180	1.000	18.55
ATOM	4747	O	SER	C	155	85.277	39.408	30.715	1.000	17.19
ATOM	4748	N	VAL	C	156	87.165	38.924	31.847	1.000	17.22
ATOM	4749	CA	VAL	C	156	86.673	37.573	32.114	1.000	17.81
ATOM	4750	CB	VAL	C	156	87.760	36.650	32.704	1.000	22.90
ATOM	4751	CG1	VAL	C	156	88.915	36.479	31.725	1.000	24.56
ATOM	4752	CG2	VAL	C	156	88.283	37.194	34.019	1.000	22.39
ATOM	4753	C	VAL	C	156	85.464	37.589	33.060	1.000	15.91

ATOM	4754	O	VAL	C	156	84.755	36.586	33.186	1.000	18.83
ATOM	4755	N	ALA	C	157	85.215	38.704	33.730	1.000	15.01
ATOM	4756	CA	ALA	C	157	84.041	38.914	34.563	1.000	14.91
ATOM	4757	CB	ALA	C	157	84.140	40.284	35.218	1.000	13.46
ATOM	4758	C	ALA	C	157	82.748	38.820	33.761	1.000	23.14
ATOM	4759	O	ALA	C	157	81.685	38.651	34.360	1.000	22.64
ATOM	4760	N	ALA	C	158	82.854	38.929	32.432	1.000	19.67
ATOM	4761	CA	ALA	C	158	81.729	38.712	31.540	1.000	20.27
ATOM	4762	CB	ALA	C	158	82.059	39.109	30.107	1.000	20.82
ATOM	4763	C	ALA	C	158	81.304	37.253	31.572	1.000	20.48
ATOM	4764	O	ALA	C	158	80.159	36.916	31.264	1.000	22.01
ATOM	4765	N	PHE	C	159	82.244	36.380	31.953	1.000	17.98
ATOM	4766	CA	PHE	C	159	81.928	34.952	31.954	1.000	21.05
ATOM	4767	CB	PHE	C	159	82.917	34.205	31.056	1.000	22.40
ATOM	4768	CG	PHE	C	159	83.083	34.828	29.675	1.000	24.42
ATOM	4769	CD1	PHE	C	159	84.241	35.502	29.325	1.000	21.89
ATOM	4770	CD2	PHE	C	159	82.056	34.719	28.749	1.000	25.13
ATOM	4771	CE1	PHE	C	159	84.378	36.056	28.058	1.000	23.61
ATOM	4772	CE2	PHE	C	159	82.192	35.266	27.481	1.000	25.88
ATOM	4773	CZ	PHE	C	159	83.350	35.932	27.140	1.000	19.73
ATOM	4774	C	PHE	C	159	81.926	34.345	33.358	1.000	25.32
ATOM	4775	O	PHE	C	159	81.134	33.437	33.625	1.000	24.04
ATOM	4776	N	GLU	C	160	82.779	34.802	34.258	1.000	21.14
ATOM	4777	CA	GLU	C	160	82.875	34.281	35.615	1.000	24.99
ATOM	4778	CB	GLU	C	160	84.158	33.484	35.857	1.000	25.61
ATOM	4779	CG	GLU	C	160	84.429	32.284	34.995	1.000	30.25
ATOM	4780	CD	GLU	C	160	85.521	32.475	33.964	1.000	32.66
ATOM	4781	OE1	GLU	C	160	85.262	32.081	32.809	1.000	32.29
ATOM	4782	OE2	GLU	C	160	86.617	33.001	34.246	1.000	22.74
ATOM	4783	C	GLU	C	160	82.864	35.434	36.624	1.000	22.02
ATOM	4784	O	GLU	C	160	83.791	35.528	37.437	1.000	21.01
ATOM	4785	N	GLY	C	161	81.866	36.304	36.567	1.000	17.29
ATOM	4786	CA	GLY	C	161	81.851	37.439	37.491	1.000	19.00
ATOM	4787	C	GLY	C	161	81.868	36.907	38.928	1.000	20.23
ATOM	4788	O	GLY	C	161	81.181	35.925	39.227	1.000	17.32
ATOM	4789	N	GLN	C	162	82.649	37.541	39.781	1.000	18.84
ATOM	4790	CA	GLN	C	162	82.813	37.127	41.171	1.000	22.71
ATOM	4791	CB	GLN	C	162	84.206	37.487	41.685	1.000	21.68
ATOM	4792	CG	GLN	C	162	85.379	36.970	40.862	1.000	23.66
ATOM	4793	CD	GLN	C	162	86.694	37.252	41.577	1.000	24.38
ATOM	4794	OE1	GLN	C	162	87.191	38.376	41.561	1.000	25.66
ATOM	4795	NE2	GLN	C	162	87.262	36.237	42.215	1.000	22.36
ATOM	4796	C	GLN	C	162	81.789	37.808	42.070	1.000	23.11
ATOM	4797	O	GLN	C	162	81.098	38.733	41.640	1.000	21.46
ATOM	4798	N	VAL	C	163	81.711	37.370	43.324	1.000	24.81
ATOM	4799	CA	VAL	C	163	80.852	38.059	44.290	1.000	21.14
ATOM	4800	CB	VAL	C	163	80.982	37.467	45.699	1.000	18.37
ATOM	4801	CG1	VAL	C	163	80.299	38.340	46.731	1.000	22.10
ATOM	4802	CG2	VAL	C	163	80.409	36.053	45.714	1.000	14.21
ATOM	4803	C	VAL	C	163	81.224	39.537	44.312	1.000	23.76
ATOM	4804	O	VAL	C	163	82.409	39.853	44.407	1.000	25.31
ATOM	4805	N	GLY	C	164	80.234	40.420	44.203	1.000	19.76
ATOM	4806	CA	GLY	C	164	80.469	41.844	44.194	1.000	18.89
ATOM	4807	C	GLY	C	164	80.568	42.442	42.804	1.000	23.71
ATOM	4808	O	GLY	C	164	80.662	43.669	42.678	1.000	25.11
ATOM	4809	N	GLN	C	165	80.556	41.604	41.775	1.000	19.10
ATOM	4810	CA	GLN	C	165	80.814	42.018	40.411	1.000	23.28
ATOM	4811	CB	GLN	C	165	81.804	41.016	39.777	1.000	21.58
ATOM	4812	CG	GLN	C	165	83.259	41.287	40.143	1.000	24.62
ATOM	4813	CD	GLN	C	165	84.213	40.621	39.167	1.000	25.83
ATOM	4814	OE1	GLN	C	165	84.081	39.433	38.878	1.000	23.28

ATOM	4815	NE2	GLN	C	165	85.168	41.380	38.658	1.000	24.36
ATOM	4816	C	GLN	C	165	79.596	42.094	39.507	1.000	25.66
ATOM	4817	O	GLN	C	165	79.767	42.167	38.281	1.000	22.34
ATOM	4818	N	ALA	C	166	78.382	42.080	40.032	1.000	19.52
ATOM	4819	CA	ALA	C	166	77.190	42.135	39.191	1.000	19.44
ATOM	4820	CB	ALA	C	166	75.942	42.227	40.065	1.000	21.99
ATOM	4821	C	ALA	C	166	77.195	43.288	38.199	1.000	22.65
ATOM	4822	O	ALA	C	166	76.961	43.089	37.001	1.000	24.51
ATOM	4823	N	ALA	C	167	77.441	44.520	38.631	1.000	18.71
ATOM	4824	CA	ALA	C	167	77.378	45.643	37.693	1.000	19.62
ATOM	4825	CB	ALA	C	167	77.455	46.966	38.438	1.000	19.07
ATOM	4826	C	ALA	C	167	78.485	45.553	36.648	1.000	23.28
ATOM	4827	O	ALA	C	167	78.252	45.719	35.448	1.000	21.18
ATOM	4828	N	TYR	C	168	79.709	45.290	37.101	1.000	19.90
ATOM	4829	CA	TYR	C	168	80.830	45.168	36.171	1.000	18.57
ATOM	4830	CB	TYR	C	168	82.120	44.873	36.916	1.000	20.89
ATOM	4831	CG	TYR	C	168	83.408	45.040	36.139	1.000	19.26
ATOM	4832	CD1	TYR	C	168	83.852	46.293	35.737	1.000	19.37
ATOM	4833	CE1	TYR	C	168	85.030	46.461	35.030	1.000	18.00
ATOM	4834	CD2	TYR	C	168	84.195	43.936	35.814	1.000	16.76
ATOM	4835	CE2	TYR	C	168	85.379	44.090	35.105	1.000	17.87
ATOM	4836	CZ	TYR	C	168	85.783	45.348	34.717	1.000	21.43
ATOM	4837	OH	TYR	C	168	86.957	45.507	34.022	1.000	20.56
ATOM	4838	C	TYR	C	168	80.528	44.073	35.155	1.000	21.19
ATOM	4839	O	TYR	C	168	80.721	44.258	33.956	1.000	23.83
ATOM	4840	N	SER	C	169	80.037	42.938	35.647	1.000	20.45
ATOM	4841	CA	SER	C	169	79.751	41.804	34.780	1.000	17.69
ATOM	4842	CB	SER	C	169	79.316	40.582	35.587	1.000	17.03
ATOM	4843	OG	SER	C	169	80.453	39.915	36.117	1.000	19.86
ATOM	4844	C	SER	C	169	78.692	42.157	33.741	1.000	24.37
ATOM	4845	O	SER	C	169	78.810	41.724	32.586	1.000	24.38
ATOM	4846	N	ALA	C	170	77.682	42.920	34.151	1.000	22.07
ATOM	4847	CA	ALA	C	170	76.612	43.285	33.214	1.000	18.30
ATOM	4848	CB	ALA	C	170	75.502	44.022	33.939	1.000	16.49
ATOM	4849	C	ALA	C	170	77.189	44.135	32.089	1.000	22.43
ATOM	4850	O	ALA	C	170	76.948	43.962	30.898	1.000	22.50
ATOM	4851	N	SER	C	171	78.009	45.113	32.495	1.000	20.04
ATOM	4852	CA	SER	C	171	78.564	46.029	31.503	1.000	18.05
ATOM	4853	CB	SER	C	171	79.284	47.187	32.185	1.000	18.91
ATOM	4854	OG	SER	C	171	80.590	46.838	32.608	1.000	22.61
ATOM	4855	C	SER	C	171	79.486	45.276	30.547	1.000	21.94
ATOM	4856	O	SER	C	171	79.442	45.523	29.341	1.000	24.60
ATOM	4857	N	LYS	C	172	80.310	44.365	31.066	1.000	15.08
ATOM	4858	CA	LYS	C	172	81.277	43.690	30.207	1.000	19.64
ATOM	4859	CB	LYS	C	172	82.467	43.186	31.026	1.000	19.41
ATOM	4860	CG	LYS	C	172	83.239	44.295	31.722	1.000	16.40
ATOM	4861	CD	LYS	C	172	83.739	45.356	30.767	1.000	21.19
ATOM	4862	CE	LYS	C	172	84.930	46.123	31.313	1.000	16.40
ATOM	4863	NZ	LYS	C	172	85.562	47.002	30.286	1.000	17.94
ATOM	4864	C	LYS	C	172	80.621	42.556	29.427	1.000	23.18
ATOM	4865	O	LYS	C	172	81.032	42.214	28.313	1.000	20.83
ATOM	4866	N	GLY	C	173	79.574	41.964	29.995	1.000	19.64
ATOM	4867	CA	GLY	C	173	78.793	40.984	29.258	1.000	16.61
ATOM	4868	C	GLY	C	173	78.080	41.671	28.099	1.000	20.08
ATOM	4869	O	GLY	C	173	77.848	41.054	27.062	1.000	19.57
ATOM	4870	N	GLY	C	174	77.738	42.944	28.280	1.000	19.74
ATOM	4871	CA	GLY	C	174	77.081	43.697	27.218	1.000	18.27
ATOM	4872	C	GLY	C	174	78.045	43.907	26.056	1.000	23.73
ATOM	4873	O	GLY	C	174	77.672	43.840	24.882	1.000	19.78
ATOM	4874	N	ILE	C	175	79.303	44.172	26.389	1.000	23.27
ATOM	4875	CA	ILE	C	175	80.330	44.337	25.365	1.000	20.71

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ATOM   4876  CB  ILE C 175      81.688  44.695  25.994 1.000 23.26
ATOM   4877  CG2 ILE C 175      82.770  44.772  24.926 1.000 20.37
ATOM   4878  CG1 ILE C 175      81.688  45.982  26.829 1.000 21.73
ATOM   4879  CD1 ILE C 175      81.456  47.221  25.992 1.000 30.34
ATOM   4880  C   ILE C 175      80.487  43.065  24.541 1.000 20.73
ATOM   4881  O   ILE C 175      80.526  43.084  23.313 1.000 23.88
ATOM   4882  N   VAL C 176      80.585  41.936  25.239 1.000 15.48
ATOM   4883  CA  VAL C 176      80.725  40.651  24.573 1.000 14.04
ATOM   4884  CB  VAL C 176      80.845  39.518  25.610 1.000 19.74
ATOM   4885  CG1 VAL C 176      80.575  38.161  24.987 1.000 18.87
ATOM   4886  CG2 VAL C 176      82.226  39.560  26.249 1.000 19.59
ATOM   4887  C   VAL C 176      79.539  40.390  23.660 1.000 20.41
ATOM   4888  O   VAL C 176      79.680  40.023  22.493 1.000 20.54
ATOM   4889  N   GLY C 177      78.334  40.569  24.193 1.000 19.61
ATOM   4890  CA  GLY C 177      77.136  40.316  23.424 1.000 16.92
ATOM   4891  C   GLY C 177      76.986  41.203  22.213 1.000 21.30
ATOM   4892  O   GLY C 177      76.382  40.812  21.208 1.000 24.01
ATOM   4893  N   MET C 178      77.496  42.432  22.215 1.000 19.61
ATOM   4894  CA  MET C 178      77.233  43.272  21.046 1.000 17.86
ATOM   4895  CB  MET C 178      76.979  44.720  21.454 1.000 17.13
ATOM   4896  CG  MET C 178      78.191  45.421  22.045 1.000 21.09
ATOM   4897  SD  MET C 178      77.817  47.098  22.590 1.000 24.03
ATOM   4898  CE  MET C 178      79.476  47.732  22.850 1.000 18.90
ATOM   4899  C   MET C 178      78.374  43.192  20.039 1.000 21.69
ATOM   4900  O   MET C 178      78.306  43.821  18.980 1.000 22.15
ATOM   4901  N   THR C 179      79.413  42.419  20.350 1.000 18.49
ATOM   4902  CA  THR C 179      80.552  42.343  19.435 1.000 19.38
ATOM   4903  CB  THR C 179      81.715  41.578  20.077 1.000 18.75
ATOM   4904  OG1 THR C 179      82.308  42.431  21.076 1.000 18.08
ATOM   4905  CG2 THR C 179      82.821  41.290  19.072 1.000 15.74
ATOM   4906  C   THR C 179      80.138  41.746  18.094 1.000 23.48
ATOM   4907  O   THR C 179      80.402  42.366  17.054 1.000 20.76
ATOM   4908  N   LEU C 180      79.481  40.588  18.052 1.000 19.56
ATOM   4909  CA  LEU C 180      79.110  39.991  16.771 1.000 17.92
ATOM   4910  CB  LEU C 180      78.526  38.592  16.974 1.000 18.98
ATOM   4911  CG  LEU C 180      78.152  37.823  15.702 1.000 24.14
ATOM   4912  CD1 LEU C 180      79.365  37.659  14.797 1.000 26.21
ATOM   4913  CD2 LEU C 180      77.569  36.461  16.040 1.000 20.39
ATOM   4914  C   LEU C 180      78.122  40.839  15.977 1.000 21.92
ATOM   4915  O   LEU C 180      78.396  41.090  14.788 1.000 22.82
ATOM   4916  N   PRO C 181      77.001  41.271  16.543 1.000 21.19
ATOM   4917  CD  PRO C 181      76.478  41.009  17.891 1.000 20.31
ATOM   4918  CA  PRO C 181      76.067  42.119  15.783 1.000 23.54
ATOM   4919  CB  PRO C 181      74.987  42.531  16.795 1.000 22.69
ATOM   4920  CG  PRO C 181      75.557  42.179  18.132 1.000 19.47
ATOM   4921  C   PRO C 181      76.735  43.365  15.219 1.000 25.60
ATOM   4922  O   PRO C 181      76.450  43.782  14.095 1.000 20.77
ATOM   4923  N   ILE C 182      77.631  44.003  15.963 1.000 20.42
ATOM   4924  CA  ILE C 182      78.267  45.199  15.389 1.000 17.66
ATOM   4925  CB  ILE C 182      78.947  46.036  16.481 1.000 16.77
ATOM   4926  CG2 ILE C 182      79.697  47.205  15.870 1.000 18.19
ATOM   4927  CG1 ILE C 182      77.971  46.528  17.557 1.000 18.40
ATOM   4928  CD1 ILE C 182      78.654  47.095  18.788 1.000 21.84
ATOM   4929  C   ILE C 182      79.230  44.797  14.285 1.000 23.52
ATOM   4930  O   ILE C 182      79.357  45.488  13.268 1.000 23.23
ATOM   4931  N   ALA C 183      79.919  43.670  14.421 1.000 21.40
ATOM   4932  CA  ALA C 183      80.709  43.151  13.304 1.000 21.08
ATOM   4933  CB  ALA C 183      81.451  41.870  13.661 1.000 20.13
ATOM   4934  C   ALA C 183      79.796  42.897  12.108 1.000 24.15
ATOM   4935  O   ALA C 183      80.139  43.202  10.963 1.000 21.19
ATOM   4936  N   ARG C 184      78.613  42.333  12.359 1.000 21.19
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ATOM	4937	CA	ARG	C	184	77.712	42.082	11.228	1.000	22.02
ATOM	4938	CB	ARG	C	184	76.515	41.222	11.642	1.000	17.02
ATOM	4939	CG	ARG	C	184	76.907	39.790	11.944	1.000	16.66
ATOM	4940	CD	ARG	C	184	75.783	38.999	12.591	1.000	16.59
ATOM	4941	NE	ARG	C	184	76.015	37.569	12.471	1.000	18.43
ATOM	4942	CZ	ARG	C	184	75.293	36.593	12.985	1.000	18.80
ATOM	4943	NH1	ARG	C	184	75.632	35.331	12.776	1.000	18.86
ATOM	4944	NH2	ARG	C	184	74.219	36.873	13.715	1.000	21.57
ATOM	4945	C	ARG	C	184	77.259	43.401	10.614	1.000	21.95
ATOM	4946	O	ARG	C	184	77.243	43.521	9.383	1.000	21.48
ATOM	4947	N	ASP	C	185	76.913	44.384	11.444	1.000	15.88
ATOM	4948	CA	ASP	C	185	76.477	45.675	10.916	1.000	19.50
ATOM	4949	CB	ASP	C	185	76.280	46.734	11.997	1.000	19.32
ATOM	4950	CG	ASP	C	185	75.036	46.630	12.843	1.000	23.51
ATOM	4951	OD1	ASP	C	185	75.002	47.321	13.882	1.000	23.02
ATOM	4952	OD2	ASP	C	185	74.096	45.882	12.515	1.000	16.66
ATOM	4953	C	ASP	C	185	77.502	46.249	9.930	1.000	24.98
ATOM	4954	O	ASP	C	185	77.166	46.681	8.832	1.000	20.75
ATOM	4955	N	LEU	C	186	78.763	46.257	10.344	1.000	18.62
ATOM	4956	CA	LEU	C	186	79.810	46.982	9.640	1.000	20.87
ATOM	4957	CB	LEU	C	186	80.820	47.496	10.677	1.000	19.42
ATOM	4958	CG	LEU	C	186	80.255	48.395	11.775	1.000	22.20
ATOM	4959	CD1	LEU	C	186	81.361	48.953	12.672	1.000	17.85
ATOM	4960	CD2	LEU	C	186	79.458	49.547	11.178	1.000	21.31
ATOM	4961	C	LEU	C	186	80.528	46.154	8.586	1.000	21.49
ATOM	4962	O	LEU	C	186	81.397	46.655	7.861	1.000	23.84
ATOM	4963	N	ALA	C	187	80.183	44.878	8.511	1.000	14.05
ATOM	4964	CA	ALA	C	187	80.825	43.985	7.554	1.000	17.54
ATOM	4965	CB	ALA	C	187	80.217	42.594	7.650	1.000	15.77
ATOM	4966	C	ALA	C	187	80.757	44.492	6.117	1.000	23.42
ATOM	4967	O	ALA	C	187	81.804	44.388	5.460	1.000	24.58
ATOM	4968	N	PRO	C	188	79.646	44.987	5.594	1.000	26.75
ATOM	4969	CD	PRO	C	188	78.301	45.092	6.198	1.000	31.00
ATOM	4970	CA	PRO	C	188	79.633	45.490	4.212	1.000	26.89
ATOM	4971	CB	PRO	C	188	78.166	45.866	3.952	1.000	26.16
ATOM	4972	CG	PRO	C	188	77.395	45.132	4.995	1.000	31.72
ATOM	4973	C	PRO	C	188	80.485	46.730	4.014	1.000	31.65
ATOM	4974	O	PRO	C	188	80.776	47.121	2.878	1.000	33.18
ATOM	4975	N	ILE	C	189	80.914	47.408	5.076	1.000	26.20
ATOM	4976	CA	ILE	C	189	81.786	48.555	4.792	1.000	27.86
ATOM	4977	CB	ILE	C	189	81.251	49.840	5.440	1.000	33.18
ATOM	4978	CG2	ILE	C	189	80.027	50.313	4.657	1.000	37.79
ATOM	4979	CG1	ILE	C	189	80.947	49.727	6.931	1.000	28.57
ATOM	4980	CD1	ILE	C	189	80.160	50.922	7.453	1.000	30.62
ATOM	4981	C	ILE	C	189	83.220	48.297	5.238	1.000	23.24
ATOM	4982	O	ILE	C	189	84.030	49.216	5.327	1.000	23.19
ATOM	4983	N	GLY	C	190	83.524	47.029	5.501	1.000	19.61
ATOM	4984	CA	GLY	C	190	84.877	46.607	5.781	1.000	21.76
ATOM	4985	C	GLY	C	190	85.479	47.116	7.065	1.000	23.87
ATOM	4986	O	GLY	C	190	86.657	47.460	7.125	1.000	24.45
ATOM	4987	N	ILE	C	191	84.685	47.169	8.138	1.000	23.04
ATOM	4988	CA	ILE	C	191	85.276	47.514	9.433	1.000	21.87
ATOM	4989	CB	ILE	C	191	84.574	48.715	10.074	1.000	20.61
ATOM	4990	CG2	ILE	C	191	85.197	49.005	11.436	1.000	24.73
ATOM	4991	CG1	ILE	C	191	84.550	49.983	9.218	1.000	20.90
ATOM	4992	CD1	ILE	C	191	83.650	51.064	9.783	1.000	19.84
ATOM	4993	C	ILE	C	191	85.201	46.304	10.363	1.000	24.63
ATOM	4994	O	ILE	C	191	84.091	45.842	10.665	1.000	26.08
ATOM	4995	N	ARG	C	192	86.344	45.779	10.794	1.000	20.62
ATOM	4996	CA	ARG	C	192	86.350	44.608	11.674	1.000	21.27
ATOM	4997	CB	ARG	C	192	87.679	43.852	11.626	1.000	20.62

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ATOM   4998  CG  ARG C 192      87.985  43.203  10.285 1.000 20.90
ATOM   4999  CD  ARG C 192      89.210  42.323  10.330 1.000 18.84
ATOM   5000  NE  ARG C 192      90.478  43.041  10.348 1.000 23.01
ATOM   5001  CZ  ARG C 192      91.355  43.045  11.346 1.000 22.55
ATOM   5002  NH1 ARG C 192      91.114  42.367  12.458 1.000 22.22
ATOM   5003  NH2 ARG C 192      92.487  43.730  11.251 1.000 20.98
ATOM   5004  C   ARG C 192      86.057  45.037  13.114 1.000 20.57
ATOM   5005  O   ARG C 192      86.400  46.163  13.482 1.000 20.36
ATOM   5006  N   VAL C 193      85.419  44.161  13.885 1.000 20.86
ATOM   5007  CA  VAL C 193      85.130  44.469  15.292 1.000 23.25
ATOM   5008  CB  VAL C 193      83.659  44.842  15.515 1.000 23.85
ATOM   5009  CG1 VAL C 193      83.404  45.258  16.960 1.000 21.43
ATOM   5010  CG2 VAL C 193      83.258  45.976  14.575 1.000 18.16
ATOM   5011  C   VAL C 193      85.519  43.281  16.170 1.000 20.12
ATOM   5012  O   VAL C 193      85.008  42.175  15.996 1.000 16.74
ATOM   5013  N   MET C 194      86.437  43.515  17.099 1.000 18.39
ATOM   5014  CA  MET C 194      86.997  42.465  17.942 1.000 19.21
ATOM   5015  CB  MET C 194      88.421  42.135  17.486 1.000 22.24
ATOM   5016  CG  MET C 194      88.499  41.328  16.192 1.000 19.86
ATOM   5017  SD  MET C 194      88.078  39.591  16.432 1.000 19.40
ATOM   5018  CE  MET C 194      89.322  39.131  17.648 1.000 17.87
ATOM   5019  C   MET C 194      87.013  42.862  19.415 1.000 21.78
ATOM   5020  O   MET C 194      87.041  44.030  19.794 1.000 18.51
ATOM   5021  N   THR C 195      87.010  41.871  20.302 1.000 20.94
ATOM   5022  CA  THR C 195      87.027  42.216  21.729 1.000 20.90
ATOM   5023  CB  THR C 195      85.629  41.984  22.337 1.000 22.49
ATOM   5024  OG1 THR C 195      84.713  42.952  21.794 1.000 19.71
ATOM   5025  CG2 THR C 195      85.641  42.176  23.843 1.000 20.67
ATOM   5026  C   THR C 195      88.067  41.404  22.478 1.000 18.58
ATOM   5027  O   THR C 195      88.280  40.218  22.235 1.000 21.52
ATOM   5028  N   ILE C 196      88.758  42.057  23.410 1.000 21.00
ATOM   5029  CA  ILE C 196      89.699  41.346  24.271 1.000 20.59
ATOM   5030  CB  ILE C 196      91.080  42.016  24.288 1.000 22.02
ATOM   5031  CG2 ILE C 196      91.954  41.401  25.365 1.000 13.39
ATOM   5032  CG1 ILE C 196      91.783  42.010  22.923 1.000 17.94
ATOM   5033  CD1 ILE C 196      92.835  43.078  22.761 1.000 17.09
ATOM   5034  C   ILE C 196      89.116  41.295  25.687 1.000 17.92
ATOM   5035  O   ILE C 196      88.617  42.327  26.135 1.000 18.00
ATOM   5036  N   ALA C 197      89.174  40.135  26.328 1.000 17.64
ATOM   5037  CA  ALA C 197      88.730  40.004  27.714 1.000 19.48
ATOM   5038  CB  ALA C 197      87.709  38.893  27.885 1.000 15.55
ATOM   5039  C   ALA C 197      89.935  39.750  28.611 1.000 17.38
ATOM   5040  O   ALA C 197      90.373  38.612  28.764 1.000 21.58
ATOM   5041  N   PRO C 198      90.505  40.791  29.198 1.000 14.98
ATOM   5042  CD  PRO C 198      90.131  42.210  29.075 1.000 14.59
ATOM   5043  CA  PRO C 198      91.655  40.584  30.080 1.000 16.28
ATOM   5044  CB  PRO C 198      92.103  42.012  30.398 1.000 17.97
ATOM   5045  CG  PRO C 198      91.423  42.907  29.412 1.000 14.71
ATOM   5046  C   PRO C 198      91.249  39.874  31.368 1.000 20.85
ATOM   5047  O   PRO C 198      90.121  40.024  31.837 1.000 20.67
ATOM   5048  N   GLY C 199      92.145  39.101  31.962 1.000 18.62
ATOM   5049  CA  GLY C 199      91.876  38.524  33.287 1.000 20.40
ATOM   5050  C   GLY C 199      92.267  39.544  34.351 1.000 24.59
ATOM   5051  O   GLY C 199      91.475  40.429  34.678 1.000 27.81
ATOM   5052  N   LEU C 200      93.486  39.442  34.871 1.000 22.82
ATOM   5053  CA  LEU C 200      93.987  40.368  35.882 1.000 23.36
ATOM   5054  CB  LEU C 200      94.232  39.641  37.207 1.000 28.78
ATOM   5055  CG  LEU C 200      93.115  38.748  37.751 1.000 28.91
ATOM   5056  CD1 LEU C 200      93.669  37.767  38.771 1.000 25.33
ATOM   5057  CD2 LEU C 200      92.004  39.596  38.359 1.000 26.21
ATOM   5058  C   LEU C 200      95.284  41.027  35.427 1.000 22.30
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ATOM	5059	O	LEU	C	200	96.275	40.332	35.157	1.000	26.10
ATOM	5060	N	PHE	C	201	95.300	42.353	35.329	1.000	18.24
ATOM	5061	CA	PHE	C	201	96.485	43.048	34.842	1.000	21.20
ATOM	5062	CB	PHE	C	201	96.197	43.708	33.490	1.000	20.11
ATOM	5063	CG	PHE	C	201	96.364	42.761	32.305	1.000	22.13
ATOM	5064	CD1	PHE	C	201	95.433	41.770	32.063	1.000	20.96
ATOM	5065	CD2	PHE	C	201	97.455	42.886	31.460	1.000	21.03
ATOM	5066	CE1	PHE	C	201	95.583	40.920	30.980	1.000	21.62
ATOM	5067	CE2	PHE	C	201	97.605	42.044	30.374	1.000	22.29
ATOM	5068	CZ	PHE	C	201	96.666	41.062	30.134	1.000	15.56
ATOM	5069	C	PHE	C	201	96.955	44.125	35.813	1.000	24.21
ATOM	5070	O	PHE	C	201	96.132	44.768	36.461	1.000	26.00
ATOM	5071	N	GLY	C	202	98.265	44.325	35.892	1.000	25.77
ATOM	5072	CA	GLY	C	202	98.844	45.302	36.792	1.000	26.53
ATOM	5073	C	GLY	C	202	98.711	46.729	36.318	1.000	25.89
ATOM	5074	O	GLY	C	202	99.636	47.319	35.753	1.000	32.59
ATOM	5075	N	THR	C	203	97.549	47.321	36.542	1.000	22.53
ATOM	5076	CA	THR	C	203	97.288	48.706	36.172	1.000	23.17
ATOM	5077	CB	THR	C	203	96.258	48.779	35.032	1.000	27.13
ATOM	5078	OG1	THR	C	203	94.986	48.433	35.585	1.000	25.92
ATOM	5079	CG2	THR	C	203	96.567	47.775	33.934	1.000	27.46
ATOM	5080	C	THR	C	203	96.769	49.464	37.391	1.000	29.62
ATOM	5081	O	THR	C	203	96.437	48.801	38.392	1.000	25.16
ATOM	5082	N	PRO	C	204	96.688	50.788	37.353	1.000	27.16
ATOM	5083	CD	PRO	C	204	97.155	51.684	36.277	1.000	27.74
ATOM	5084	CA	PRO	C	204	96.107	51.546	38.471	1.000	30.12
ATOM	5085	CB	PRO	C	204	96.141	52.996	37.970	1.000	28.02
ATOM	5086	CG	PRO	C	204	97.239	53.024	36.956	1.000	27.83
ATOM	5087	C	PRO	C	204	94.663	51.176	38.797	1.000	37.24
ATOM	5088	O	PRO	C	204	94.143	51.572	39.851	1.000	35.02
ATOM	5089	N	LEU	C	205	93.981	50.433	37.927	1.000	35.79
ATOM	5090	CA	LEU	C	205	92.608	50.024	38.223	1.000	30.70
ATOM	5091	CB	LEU	C	205	92.033	49.167	37.101	1.000	29.09
ATOM	5092	CG	LEU	C	205	90.536	48.854	37.159	1.000	35.68
ATOM	5093	CD1	LEU	C	205	89.730	50.060	36.699	1.000	31.89
ATOM	5094	CD2	LEU	C	205	90.211	47.615	36.337	1.000	31.92
ATOM	5095	C	LEU	C	205	92.579	49.247	39.538	1.000	30.14
ATOM	5096	O	LEU	C	205	91.648	49.387	40.329	1.000	36.81
ATOM	5097	N	LEU	C	206	93.605	48.425	39.734	1.000	31.90
ATOM	5098	CA	LEU	C	206	93.699	47.534	40.879	1.000	29.40
ATOM	5099	CB	LEU	C	206	94.474	46.273	40.479	1.000	25.89
ATOM	5100	CG	LEU	C	206	93.872	45.442	39.343	1.000	28.59
ATOM	5101	CD1	LEU	C	206	94.364	43.998	39.404	1.000	29.19
ATOM	5102	CD2	LEU	C	206	92.356	45.484	39.370	1.000	27.50
ATOM	5103	C	LEU	C	206	94.370	48.172	42.086	1.000	40.42
ATOM	5104	O	LEU	C	206	94.515	47.526	43.129	1.000	39.05
ATOM	5105	N	THR	C	207	94.798	49.431	41.989	1.000	42.35
ATOM	5106	CA	THR	C	207	95.542	50.010	43.106	1.000	48.45
ATOM	5107	CB	THR	C	207	96.139	51.382	42.745	1.000	49.14
ATOM	5108	OG1	THR	C	207	97.202	51.198	41.798	1.000	62.11
ATOM	5109	CG2	THR	C	207	96.756	52.042	43.969	1.000	47.12
ATOM	5110	C	THR	C	207	94.670	50.153	44.352	1.000	52.40
ATOM	5111	O	THR	C	207	95.223	50.178	45.452	1.000	44.87
ATOM	5112	N	SER	C	208	93.364	50.240	44.157	1.000	57.38
ATOM	5113	CA	SER	C	208	92.357	50.486	45.172	1.000	59.32
ATOM	5114	CB	SER	C	208	90.995	50.794	44.529	1.000	59.37
ATOM	5115	OG	SER	C	208	91.092	51.853	43.591	1.000	80.12
ATOM	5116	C	SER	C	208	92.166	49.319	46.133	1.000	61.87
ATOM	5117	O	SER	C	208	91.367	49.408	47.070	1.000	69.52
ATOM	5118	N	LEU	C	209	92.876	48.214	45.915	1.000	54.77
ATOM	5119	CA	LEU	C	209	92.625	47.052	46.762	1.000	53.13

ATOM	5120	CB	LEU	C	209	92.245	45.838	45.916	1.000	53.90
ATOM	5121	CG	LEU	C	209	91.531	46.076	44.587	1.000	49.79
ATOM	5122	CD1	LEU	C	209	92.130	45.191	43.502	1.000	35.07
ATOM	5123	CD2	LEU	C	209	90.036	45.831	44.712	1.000	30.84
ATOM	5124	C	LEU	C	209	93.833	46.716	47.635	1.000	48.32
ATOM	5125	O	LEU	C	209	94.971	47.000	47.273	1.000	49.62
ATOM	5126	N	PRO	C	210	93.533	46.098	48.773	1.000	43.75
ATOM	5127	CD	PRO	C	210	92.167	45.769	49.215	1.000	47.38
ATOM	5128	CA	PRO	C	210	94.543	45.654	49.726	1.000	47.32
ATOM	5129	CB	PRO	C	210	93.764	44.736	50.672	1.000	44.91
ATOM	5130	CG	PRO	C	210	92.356	45.210	50.596	1.000	42.82
ATOM	5131	C	PRO	C	210	95.624	44.825	49.039	1.000	55.73
ATOM	5132	O	PRO	C	210	95.271	43.950	48.245	1.000	51.13
ATOM	5133	N	GLU	C	211	96.882	45.104	49.355	1.000	62.78
ATOM	5134	CA	GLU	C	211	97.985	44.332	48.782	1.000	65.71
ATOM	5135	CB	GLU	C	211	99.313	44.751	49.413	1.000	73.61
ATOM	5136	CG	GLU	C	211	100.508	43.921	48.979	1.000	78.96
ATOM	5137	CD	GLU	C	211	101.366	44.592	47.924	1.000	83.27
ATOM	5138	OE1	GLU	C	211	100.804	45.229	47.007	1.000	78.56
ATOM	5139	OE2	GLU	C	211	102.610	44.481	48.011	1.000	91.83
ATOM	5140	C	GLU	C	211	97.738	42.840	48.950	1.000	57.45
ATOM	5141	O	GLU	C	211	97.930	42.039	48.037	1.000	57.10
ATOM	5142	N	LYS	C	212	97.276	42.425	50.129	1.000	54.71
ATOM	5143	CA	LYS	C	212	96.958	41.008	50.289	1.000	53.11
ATOM	5144	CB	LYS	C	212	96.545	40.709	51.719	1.000	61.51
ATOM	5145	C	LYS	C	212	95.863	40.596	49.315	1.000	54.29
ATOM	5146	O	LYS	C	212	95.752	39.430	48.933	1.000	47.94
ATOM	5147	N	VAL	C	213	95.031	41.550	48.895	1.000	55.78
ATOM	5148	CA	VAL	C	213	93.969	41.196	47.948	1.000	59.39
ATOM	5149	CB	VAL	C	213	92.876	42.278	47.901	1.000	63.29
ATOM	5150	CG1	VAL	C	213	91.983	42.096	46.683	1.000	59.66
ATOM	5151	CG2	VAL	C	213	92.047	42.243	49.180	1.000	60.14
ATOM	5152	C	VAL	C	213	94.538	40.956	46.553	1.000	53.95
ATOM	5153	O	VAL	C	213	94.379	39.880	45.971	1.000	42.35
ATOM	5154	N	ARG	C	214	95.216	41.958	46.006	1.000	47.03
ATOM	5155	CA	ARG	C	214	95.901	41.833	44.729	1.000	45.10
ATOM	5156	CB	ARG	C	214	96.803	43.047	44.497	1.000	45.03
ATOM	5157	CG	ARG	C	214	96.359	43.982	43.393	1.000	50.46
ATOM	5158	CD	ARG	C	214	97.469	44.945	43.009	1.000	53.70
ATOM	5159	NE	ARG	C	214	98.264	45.387	44.148	1.000	52.31
ATOM	5160	CZ	ARG	C	214	97.821	46.112	45.165	1.000	49.37
ATOM	5161	NH1	ARG	C	214	96.555	46.504	45.225	1.000	41.96
ATOM	5162	NH2	ARG	C	214	98.657	46.447	46.139	1.000	51.95
ATOM	5163	C	ARG	C	214	96.753	40.570	44.668	1.000	38.21
ATOM	5164	O	ARG	C	214	96.561	39.721	43.803	1.000	46.16
ATOM	5165	N	ASN	C	215	97.704	40.460	45.592	1.000	39.14
ATOM	5166	CA	ASN	C	215	98.666	39.359	45.567	1.000	43.82
ATOM	5167	CB	ASN	C	215	99.623	39.443	46.757	1.000	42.67
ATOM	5168	CG	ASN	C	215	100.568	40.622	46.684	1.000	43.42
ATOM	5169	OD1	ASN	C	215	101.050	40.994	45.614	1.000	54.29
ATOM	5170	ND2	ASN	C	215	100.863	41.229	47.828	1.000	46.57
ATOM	5171	C	ASN	C	215	97.947	38.016	45.537	1.000	42.43
ATOM	5172	O	ASN	C	215	98.311	37.108	44.786	1.000	52.24
ATOM	5173	N	PHE	C	216	96.905	37.889	46.356	1.000	36.32
ATOM	5174	CA	PHE	C	216	96.124	36.660	46.348	1.000	33.94
ATOM	5175	CB	PHE	C	216	94.936	36.737	47.306	1.000	37.12
ATOM	5176	CG	PHE	C	216	94.029	35.518	47.179	1.000	43.40
ATOM	5177	CD1	PHE	C	216	94.485	34.270	47.573	1.000	46.19
ATOM	5178	CD2	PHE	C	216	92.751	35.642	46.668	1.000	44.18
ATOM	5179	CE1	PHE	C	216	93.678	33.155	47.457	1.000	49.58
ATOM	5180	CE2	PHE	C	216	91.937	34.532	46.553	1.000	46.42

ATOM	5181	CZ	PHE	C	216	92.400	33.288	46.943	1.000	48.68
ATOM	5182	C	PHE	C	216	95.622	36.362	44.932	1.000	36.62
ATOM	5183	O	PHE	C	216	95.951	35.308	44.393	1.000	35.34
ATOM	5184	N	LEU	C	217	94.855	37.295	44.383	1.000	38.86
ATOM	5185	CA	LEU	C	217	94.374	37.250	43.005	1.000	36.55
ATOM	5186	CB	LEU	C	217	93.819	38.603	42.563	1.000	41.84
ATOM	5187	CG	LEU	C	217	92.476	39.049	43.142	1.000	35.99
ATOM	5188	CD1	LEU	C	217	92.146	40.475	42.727	1.000	34.52
ATOM	5189	CD2	LEU	C	217	91.359	38.112	42.714	1.000	41.78
ATOM	5190	C	LEU	C	217	95.515	36.823	42.083	1.000	23.70
ATOM	5191	O	LEU	C	217	95.412	35.855	41.336	1.000	39.82
ATOM	5192	N	ALA	C	218	96.620	37.555	42.184	1.000	29.42
ATOM	5193	CA	ALA	C	218	97.825	37.237	41.433	1.000	33.94
ATOM	5194	CB	ALA	C	218	98.973	38.118	41.913	1.000	39.99
ATOM	5195	C	ALA	C	218	98.203	35.767	41.540	1.000	36.98
ATOM	5196	O	ALA	C	218	98.544	35.103	40.556	1.000	33.61
ATOM	5197	N	SER	C	219	98.161	35.216	42.751	1.000	33.61
ATOM	5198	CA	SER	C	219	98.612	33.844	42.946	1.000	33.83
ATOM	5199	CB	SER	C	219	98.711	33.556	44.453	1.000	37.13
ATOM	5200	OG	SER	C	219	97.402	33.337	44.963	1.000	40.94
ATOM	5201	C	SER	C	219	97.701	32.806	42.301	1.000	35.38
ATOM	5202	O	SER	C	219	98.063	31.628	42.222	1.000	28.50
ATOM	5203	N	GLN	C	220	96.522	33.218	41.845	1.000	33.22
ATOM	5204	CA	GLN	C	220	95.554	32.316	41.242	1.000	29.91
ATOM	5205	CB	GLN	C	220	94.138	32.880	41.421	1.000	35.00
ATOM	5206	CG	GLN	C	220	93.738	33.114	42.865	1.000	45.83
ATOM	5207	CD	GLN	C	220	93.228	31.841	43.519	1.000	55.68
ATOM	5208	OE1	GLN	C	220	94.027	31.086	44.081	1.000	68.62
ATOM	5209	NE2	GLN	C	220	91.922	31.615	43.432	1.000	59.51
ATOM	5210	C	GLN	C	220	95.780	32.064	39.754	1.000	26.22
ATOM	5211	O	GLN	C	220	95.211	31.112	39.214	1.000	25.79
ATOM	5212	N	VAL	C	221	96.581	32.877	39.073	1.000	23.25
ATOM	5213	CA	VAL	C	221	96.763	32.666	37.628	1.000	20.94
ATOM	5214	CB	VAL	C	221	97.491	33.870	37.009	1.000	21.52
ATOM	5215	CG1	VAL	C	221	97.605	33.689	35.502	1.000	15.39
ATOM	5216	CG2	VAL	C	221	96.782	35.168	37.379	1.000	17.44
ATOM	5217	C	VAL	C	221	97.548	31.396	37.375	1.000	25.25
ATOM	5218	O	VAL	C	221	98.681	31.277	37.853	1.000	26.36
ATOM	5219	N	PRO	C	222	96.990	30.413	36.682	1.000	26.70
ATOM	5220	CD	PRO	C	222	95.643	30.367	36.087	1.000	22.74
ATOM	5221	CA	PRO	C	222	97.725	29.149	36.494	1.000	24.77
ATOM	5222	CB	PRO	C	222	96.800	28.347	35.573	1.000	17.60
ATOM	5223	CG	PRO	C	222	95.440	28.884	35.910	1.000	20.38
ATOM	5224	C	PRO	C	222	99.108	29.320	35.885	1.000	28.74
ATOM	5225	O	PRO	C	222	100.083	28.833	36.476	1.000	24.95
ATOM	5226	N	PHE	C	223	99.278	29.975	34.742	1.000	21.18
ATOM	5227	CA	PHE	C	223	100.619	30.161	34.198	1.000	17.85
ATOM	5228	CB	PHE	C	223	101.253	28.859	33.680	1.000	17.91
ATOM	5229	CG	PHE	C	223	102.659	29.160	33.145	1.000	27.36
ATOM	5230	CD1	PHE	C	223	103.708	29.418	34.013	1.000	29.04
ATOM	5231	CD2	PHE	C	223	102.917	29.189	31.788	1.000	23.22
ATOM	5232	CE1	PHE	C	223	104.980	29.711	33.556	1.000	25.46
ATOM	5233	CE2	PHE	C	223	104.179	29.483	31.314	1.000	23.84
ATOM	5234	CZ	PHE	C	223	105.216	29.750	32.189	1.000	25.17
ATOM	5235	C	PHE	C	223	100.609	31.174	33.058	1.000	27.06
ATOM	5236	O	PHE	C	223	99.820	31.006	32.117	1.000	27.00
ATOM	5237	N	PRO	C	224	101.451	32.202	33.097	1.000	27.86
ATOM	5238	CD	PRO	C	224	101.553	33.223	32.041	1.000	27.73
ATOM	5239	CA	PRO	C	224	102.399	32.439	34.187	1.000	29.28
ATOM	5240	CB	PRO	C	224	103.372	33.462	33.601	1.000	32.92
ATOM	5241	CG	PRO	C	224	102.618	34.157	32.523	1.000	29.32

ATOM	5242	C	PRO	C	224	101.716	33.013	35.425	1.000	27.75
ATOM	5243	O	PRO	C	224	100.771	33.787	35.301	1.000	23.30
ATOM	5244	N	SER	C	225	102.188	32.606	36.593	1.000	25.01
ATOM	5245	CA	SER	C	225	101.558	32.933	37.859	1.000	29.07
ATOM	5246	CB	SER	C	225	102.016	31.948	38.947	1.000	37.20
ATOM	5247	OG	SER	C	225	101.612	30.634	38.598	1.000	57.33
ATOM	5248	C	SER	C	225	101.858	34.350	38.315	1.000	29.02
ATOM	5249	O	SER	C	225	102.663	34.588	39.219	1.000	31.13
ATOM	5250	N	ARG	C	226	101.192	35.299	37.675	1.000	22.75
ATOM	5251	CA	ARG	C	226	101.418	36.713	37.970	1.000	21.78
ATOM	5252	CB	ARG	C	226	102.787	37.164	37.456	1.000	21.27
ATOM	5253	CG	ARG	C	226	102.998	36.810	35.981	1.000	20.87
ATOM	5254	CD	ARG	C	226	103.943	37.804	35.323	1.000	23.93
ATOM	5255	NE	ARG	C	226	104.283	37.417	33.956	1.000	22.64
ATOM	5256	CZ	ARG	C	226	103.702	37.904	32.866	1.000	29.11
ATOM	5257	NH1	ARG	C	226	104.094	37.476	31.668	1.000	20.68
ATOM	5258	NH2	ARG	C	226	102.735	38.808	32.972	1.000	20.52
ATOM	5259	C	ARG	C	226	100.330	37.550	37.321	1.000	24.27
ATOM	5260	O	ARG	C	226	99.580	37.031	36.486	1.000	26.38
ATOM	5261	N	LEU	C	227	100.248	38.823	37.697	1.000	22.29
ATOM	5262	CA	LEU	C	227	99.365	39.717	36.947	1.000	25.06
ATOM	5263	CB	LEU	C	227	99.292	41.089	37.621	1.000	23.75
ATOM	5264	CG	LEU	C	227	98.844	41.076	39.092	1.000	23.95
ATOM	5265	CD1	LEU	C	227	98.975	42.444	39.742	1.000	21.02
ATOM	5266	CD2	LEU	C	227	97.414	40.579	39.194	1.000	19.70
ATOM	5267	C	LEU	C	227	99.875	39.829	35.514	1.000	26.87
ATOM	5268	O	LEU	C	227	101.080	39.746	35.238	1.000	20.04
ATOM	5269	N	GLY	C	228	98.964	40.039	34.562	1.000	24.87
ATOM	5270	CA	GLY	C	228	99.408	40.279	33.192	1.000	18.72
ATOM	5271	C	GLY	C	228	100.106	41.627	33.089	1.000	21.14
ATOM	5272	O	GLY	C	228	99.800	42.564	33.835	1.000	21.52
ATOM	5273	N	ASP	C	229	101.045	41.742	32.159	1.000	24.60
ATOM	5274	CA	ASP	C	229	101.741	43.004	31.910	1.000	21.43
ATOM	5275	CB	ASP	C	229	103.164	42.746	31.442	1.000	26.01
ATOM	5276	CG	ASP	C	229	104.006	44.001	31.340	1.000	37.41
ATOM	5277	OD1	ASP	C	229	105.238	43.880	31.526	1.000	53.25
ATOM	5278	OD2	ASP	C	229	103.477	45.102	31.082	1.000	38.34
ATOM	5279	C	ASP	C	229	100.973	43.799	30.860	1.000	19.57
ATOM	5280	O	ASP	C	229	100.660	43.204	29.824	1.000	23.49
ATOM	5281	N	PRO	C	230	100.661	45.059	31.112	1.000	22.69
ATOM	5282	CD	PRO	C	230	100.998	45.823	32.326	1.000	23.91
ATOM	5283	CA	PRO	C	230	99.893	45.861	30.152	1.000	21.64
ATOM	5284	CB	PRO	C	230	100.031	47.287	30.691	1.000	23.94
ATOM	5285	CG	PRO	C	230	100.194	47.090	32.168	1.000	24.54
ATOM	5286	C	PRO	C	230	100.469	45.765	28.744	1.000	25.45
ATOM	5287	O	PRO	C	230	99.706	45.781	27.779	1.000	25.01
ATOM	5288	N	ALA	C	231	101.789	45.633	28.634	1.000	24.95
ATOM	5289	CA	ALA	C	231	102.414	45.495	27.322	1.000	27.22
ATOM	5290	CB	ALA	C	231	103.933	45.490	27.425	1.000	23.00
ATOM	5291	C	ALA	C	231	101.924	44.231	26.614	1.000	25.34
ATOM	5292	O	ALA	C	231	101.917	44.192	25.385	1.000	27.31
ATOM	5293	N	GLU	C	232	101.523	43.222	27.375	1.000	23.62
ATOM	5294	CA	GLU	C	232	100.996	41.976	26.806	1.000	21.90
ATOM	5295	CB	GLU	C	232	100.999	40.864	27.853	1.000	21.70
ATOM	5296	CG	GLU	C	232	102.395	40.453	28.301	1.000	24.49
ATOM	5297	CD	GLU	C	232	102.451	39.569	29.525	1.000	22.86
ATOM	5298	OE1	GLU	C	232	101.660	39.769	30.476	1.000	23.68
ATOM	5299	OE2	GLU	C	232	103.296	38.648	29.576	1.000	22.83
ATOM	5300	C	GLU	C	232	99.607	42.219	26.227	1.000	20.51
ATOM	5301	O	GLU	C	232	99.202	41.633	25.226	1.000	21.77
ATOM	5302	N	TYR	C	233	98.841	43.115	26.856	1.000	20.18

ATOM	5303	CA	TYR	C	233	97.570	43.521	26.259	1.000	23.47
ATOM	5304	CB	TYR	C	233	96.766	44.393	27.226	1.000	20.77
ATOM	5305	CG	TYR	C	233	95.509	44.996	26.634	1.000	21.03
ATOM	5306	CD1	TYR	C	233	94.302	44.305	26.635	1.000	19.12
ATOM	5307	CE1	TYR	C	233	93.168	44.884	26.084	1.000	19.16
ATOM	5308	CD2	TYR	C	233	95.521	46.266	26.069	1.000	17.67
ATOM	5309	CE2	TYR	C	233	94.404	46.838	25.520	1.000	21.50
ATOM	5310	CZ	TYR	C	233	93.215	46.140	25.530	1.000	20.40
ATOM	5311	OH	TYR	C	233	92.105	46.738	24.972	1.000	20.20
ATOM	5312	C	TYR	C	233	97.856	44.254	24.947	1.000	26.17
ATOM	5313	O	TYR	C	233	97.257	44.012	23.905	1.000	24.88
ATOM	5314	N	ALA	C	234	98.775	45.210	24.983	1.000	23.28
ATOM	5315	CA	ALA	C	234	99.122	45.986	23.793	1.000	20.34
ATOM	5316	CB	ALA	C	234	100.225	46.981	24.114	1.000	25.63
ATOM	5317	C	ALA	C	234	99.527	45.064	22.646	1.000	20.70
ATOM	5318	O	ALA	C	234	99.126	45.278	21.502	1.000	22.04
ATOM	5319	N	HIS	C	235	100.323	44.045	22.979	1.000	21.74
ATOM	5320	CA	HIS	C	235	100.803	43.110	21.969	1.000	22.45
ATOM	5321	CB	HIS	C	235	101.734	42.052	22.566	1.000	20.97
ATOM	5322	CG	HIS	C	235	102.042	40.900	21.653	1.000	23.06
ATOM	5323	CD2	HIS	C	235	101.439	39.716	21.406	1.000	20.44
ATOM	5324	ND1	HIS	C	235	103.151	40.917	20.829	1.000	29.37
ATOM	5325	CE1	HIS	C	235	103.200	39.803	20.128	1.000	24.08
ATOM	5326	NE2	HIS	C	235	102.168	39.049	20.453	1.000	23.74
ATOM	5327	C	HIS	C	235	99.617	42.442	21.274	1.000	25.47
ATOM	5328	O	HIS	C	235	99.652	42.256	20.057	1.000	19.63
ATOM	5329	N	LEU	C	236	98.602	42.055	22.035	1.000	24.60
ATOM	5330	CA	LEU	C	236	97.441	41.381	21.445	1.000	22.50
ATOM	5331	CB	LEU	C	236	96.574	40.764	22.537	1.000	18.41
ATOM	5332	CG	LEU	C	236	95.340	39.987	22.079	1.000	21.33
ATOM	5333	CD1	LEU	C	236	95.711	38.877	21.105	1.000	17.49
ATOM	5334	CD2	LEU	C	236	94.587	39.408	23.281	1.000	15.39
ATOM	5335	C	LEU	C	236	96.631	42.339	20.576	1.000	22.47
ATOM	5336	O	LEU	C	236	96.032	41.921	19.585	1.000	21.32
ATOM	5337	N	VAL	C	237	96.603	43.614	20.927	1.000	21.37
ATOM	5338	CA	VAL	C	237	95.941	44.639	20.133	1.000	23.21
ATOM	5339	CB	VAL	C	237	96.008	46.029	20.800	1.000	24.40
ATOM	5340	CG1	VAL	C	237	95.579	47.111	19.808	1.000	23.54
ATOM	5341	CG2	VAL	C	237	95.158	46.088	22.064	1.000	21.30
ATOM	5342	C	VAL	C	237	96.587	44.742	18.750	1.000	27.11
ATOM	5343	O	VAL	C	237	95.920	44.818	17.718	1.000	20.91
ATOM	5344	N	GLN	C	238	97.920	44.767	18.730	1.000	23.43
ATOM	5345	CA	GLN	C	238	98.648	44.860	17.471	1.000	20.96
ATOM	5346	CB	GLN	C	238	100.156	44.994	17.711	1.000	25.92
ATOM	5347	CG	GLN	C	238	100.944	45.076	16.406	1.000	34.72
ATOM	5348	CD	GLN	C	238	102.331	45.670	16.621	1.000	45.75
ATOM	5349	OE1	GLN	C	238	102.671	46.122	17.718	1.000	42.99
ATOM	5350	NE2	GLN	C	238	103.139	45.672	15.565	1.000	37.12
ATOM	5351	C	GLN	C	238	98.406	43.631	16.610	1.000	17.47
ATOM	5352	O	GLN	C	238	98.163	43.729	15.409	1.000	31.42
ATOM	5353	N	ALA	C	239	98.471	42.462	17.226	1.000	13.40
ATOM	5354	CA	ALA	C	239	98.173	41.199	16.561	1.000	17.82
ATOM	5355	CB	ALA	C	239	98.167	40.051	17.556	1.000	20.85
ATOM	5356	C	ALA	C	239	96.831	41.264	15.840	1.000	23.82
ATOM	5357	O	ALA	C	239	96.671	40.812	14.702	1.000	22.62
ATOM	5358	N	ILE	C	240	95.851	41.848	16.538	1.000	21.62
ATOM	5359	CA	ILE	C	240	94.500	41.902	15.974	1.000	25.07
ATOM	5360	CB	ILE	C	240	93.479	42.245	17.069	1.000	24.15
ATOM	5361	CG2	ILE	C	240	92.127	42.582	16.473	1.000	20.46
ATOM	5362	CG1	ILE	C	240	93.340	41.152	18.139	1.000	17.17
ATOM	5363	CD1	ILE	C	240	92.579	41.637	19.357	1.000	21.22

ATOM	5364	C	ILE	C	240	94.461	42.901	14.826	1.000	25.22
ATOM	5365	O	ILE	C	240	93.910	42.633	13.759	1.000	21.79
ATOM	5366	N	ILE	C	241	95.074	44.064	15.038	1.000	20.24
ATOM	5367	CA	ILE	C	241	95.171	45.059	13.974	1.000	25.86
ATOM	5368	CB	ILE	C	241	95.974	46.291	14.416	1.000	27.53
ATOM	5369	CG2	ILE	C	241	96.380	47.147	13.218	1.000	24.99
ATOM	5370	CG1	ILE	C	241	95.266	47.162	15.465	1.000	23.00
ATOM	5371	CD1	ILE	C	241	96.201	48.192	16.082	1.000	20.65
ATOM	5372	C	ILE	C	241	95.810	44.445	12.731	1.000	27.42
ATOM	5373	O	ILE	C	241	95.363	44.672	11.603	1.000	25.67
ATOM	5374	N	GLU	C	242	96.864	43.656	12.910	1.000	21.24
ATOM	5375	CA	GLU	C	242	97.615	43.141	11.764	1.000	23.07
ATOM	5376	CB	GLU	C	242	98.992	42.649	12.234	1.000	21.75
ATOM	5377	CG	GLU	C	242	99.880	43.739	12.813	1.000	23.24
ATOM	5378	CD	GLU	C	242	101.247	43.211	13.211	1.000	32.86
ATOM	5379	OE1	GLU	C	242	102.164	44.031	13.422	1.000	41.93
ATOM	5380	OE2	GLU	C	242	101.415	41.976	13.324	1.000	38.32
ATOM	5381	C	GLU	C	242	96.896	42.024	11.021	1.000	27.62
ATOM	5382	O	GLU	C	242	97.032	41.898	9.796	1.000	25.36
ATOM	5383	N	ASN	C	243	96.135	41.200	11.737	1.000	20.54
ATOM	5384	CA	ASN	C	243	95.539	40.009	11.155	1.000	22.70
ATOM	5385	CB	ASN	C	243	95.428	38.910	12.223	1.000	20.67
ATOM	5386	CG	ASN	C	243	95.172	37.550	11.608	1.000	23.57
ATOM	5387	OD1	ASN	C	243	94.183	37.346	10.889	1.000	21.00
ATOM	5388	ND2	ASN	C	243	96.072	36.619	11.899	1.000	16.27
ATOM	5389	C	ASN	C	243	94.167	40.275	10.537	1.000	29.01
ATOM	5390	O	ASN	C	243	93.188	40.455	11.263	1.000	22.16
ATOM	5391	N	PRO	C	244	94.109	40.284	9.210	1.000	26.89
ATOM	5392	CD	PRO	C	244	95.226	39.922	8.304	1.000	24.01
ATOM	5393	CA	PRO	C	244	92.906	40.668	8.481	1.000	21.88
ATOM	5394	CB	PRO	C	244	93.357	40.639	7.003	1.000	24.45
ATOM	5395	CG	PRO	C	244	94.849	40.632	7.029	1.000	26.59
ATOM	5396	C	PRO	C	244	91.731	39.713	8.622	1.000	21.54
ATOM	5397	O	PRO	C	244	90.608	40.076	8.233	1.000	23.93
ATOM	5398	N	PHE	C	245	91.930	38.505	9.143	1.000	21.82
ATOM	5399	CA	PHE	C	245	90.804	37.570	9.215	1.000	19.75
ATOM	5400	CB	PHE	C	245	91.205	36.179	8.726	1.000	21.43
ATOM	5401	CG	PHE	C	245	90.140	35.467	7.909	1.000	19.34
ATOM	5402	CD1	PHE	C	245	89.744	34.179	8.236	1.000	17.81
ATOM	5403	CD2	PHE	C	245	89.551	36.074	6.816	1.000	18.35
ATOM	5404	CE1	PHE	C	245	88.777	33.508	7.502	1.000	20.11
ATOM	5405	CE2	PHE	C	245	88.574	35.423	6.080	1.000	16.76
ATOM	5406	CZ	PHE	C	245	88.181	34.145	6.416	1.000	17.96
ATOM	5407	C	PHE	C	245	90.221	37.480	10.620	1.000	24.50
ATOM	5408	O	PHE	C	245	89.310	36.688	10.858	1.000	20.21
ATOM	5409	N	LEU	C	246	90.718	38.285	11.553	1.000	24.14
ATOM	5410	CA	LEU	C	246	90.183	38.270	12.917	1.000	25.12
ATOM	5411	CB	LEU	C	246	91.275	38.644	13.922	1.000	21.84
ATOM	5412	CG	LEU	C	246	92.216	37.516	14.350	1.000	22.81
ATOM	5413	CD1	LEU	C	246	93.366	38.063	15.192	1.000	22.23
ATOM	5414	CD2	LEU	C	246	91.469	36.427	15.117	1.000	18.03
ATOM	5415	C	LEU	C	246	88.987	39.208	13.042	1.000	18.79
ATOM	5416	O	LEU	C	246	89.135	40.426	12.967	1.000	17.92
ATOM	5417	N	ASN	C	247	87.801	38.631	13.232	1.000	19.81
ATOM	5418	CA	ASN	C	247	86.606	39.468	13.280	1.000	22.54
ATOM	5419	CB	ASN	C	247	86.151	39.746	11.839	1.000	20.64
ATOM	5420	CG	ASN	C	247	85.230	40.938	11.705	1.000	27.10
ATOM	5421	OD1	ASN	C	247	84.935	41.661	12.663	1.000	18.27
ATOM	5422	ND2	ASN	C	247	84.767	41.143	10.468	1.000	23.10
ATOM	5423	C	ASN	C	247	85.473	38.824	14.070	1.000	17.99
ATOM	5424	O	ASN	C	247	85.265	37.616	14.005	1.000	16.75

ATOM	5425	N	GLY	C	248	84.724	39.640	14.801	1.000	19.04
ATOM	5426	CA	GLY	C	248	83.533	39.197	15.497	1.000	19.49
ATOM	5427	C	GLY	C	248	83.815	38.330	16.704	1.000	19.73
ATOM	5428	O	GLY	C	248	82.903	37.601	17.111	1.000	17.58
ATOM	5429	N	GLU	C	249	85.017	38.381	17.268	1.000	15.98
ATOM	5430	CA	GLU	C	249	85.389	37.405	18.302	1.000	16.41
ATOM	5431	CB	GLU	C	249	86.452	36.453	17.759	1.000	18.31
ATOM	5432	CG	GLU	C	249	87.296	35.682	18.759	1.000	19.50
ATOM	5433	CD	GLU	C	249	86.549	34.567	19.453	1.000	21.59
ATOM	5434	OE1	GLU	C	249	87.127	33.491	19.715	1.000	24.29
ATOM	5435	OE2	GLU	C	249	85.352	34.729	19.758	1.000	21.15
ATOM	5436	C	GLU	C	249	85.860	38.084	19.582	1.000	16.54
ATOM	5437	O	GLU	C	249	86.310	39.231	19.581	1.000	20.08
ATOM	5438	N	VAL	C	250	85.741	37.363	20.688	1.000	19.50
ATOM	5439	CA	VAL	C	250	86.236	37.744	22.003	1.000	14.75
ATOM	5440	CB	VAL	C	250	85.148	37.588	23.088	1.000	23.09
ATOM	5441	CG1	VAL	C	250	85.708	37.916	24.463	1.000	20.21
ATOM	5442	CG2	VAL	C	250	83.952	38.474	22.781	1.000	21.17
ATOM	5443	C	VAL	C	250	87.427	36.864	22.366	1.000	16.06
ATOM	5444	O	VAL	C	250	87.336	35.642	22.225	1.000	17.76
ATOM	5445	N	ILE	C	251	88.533	37.440	22.813	1.000	18.46
ATOM	5446	CA	ILE	C	251	89.715	36.640	23.141	1.000	19.52
ATOM	5447	CB	ILE	C	251	90.914	37.049	22.261	1.000	19.31
ATOM	5448	CG2	ILE	C	251	92.214	36.427	22.753	1.000	17.15
ATOM	5449	CG1	ILE	C	251	90.679	36.759	20.775	1.000	17.56
ATOM	5450	CD1	ILE	C	251	91.777	37.281	19.878	1.000	19.77
ATOM	5451	C	ILE	C	251	90.104	36.808	24.602	1.000	17.13
ATOM	5452	O	ILE	C	251	90.381	37.941	25.018	1.000	20.67
ATOM	5453	N	ARG	C	252	90.135	35.707	25.349	1.000	17.57
ATOM	5454	CA	ARG	C	252	90.583	35.804	26.737	1.000	20.50
ATOM	5455	CB	ARG	C	252	90.206	34.567	27.548	1.000	20.54
ATOM	5456	CG	ARG	C	252	88.710	34.394	27.774	1.000	23.09
ATOM	5457	CD	ARG	C	252	88.441	33.054	28.452	1.000	21.26
ATOM	5458	NE	ARG	C	252	88.769	33.163	29.873	1.000	20.67
ATOM	5459	CZ	ARG	C	252	87.918	33.016	30.878	1.000	20.65
ATOM	5460	NH1	ARG	C	252	88.351	33.143	32.127	1.000	16.60
ATOM	5461	NH2	ARG	C	252	86.649	32.746	30.628	1.000	20.79
ATOM	5462	C	ARG	C	252	92.099	35.983	26.807	1.000	19.07
ATOM	5463	O	ARG	C	252	92.836	35.200	26.213	1.000	15.41
ATOM	5464	N	LEU	C	253	92.545	36.990	27.541	1.000	18.07
ATOM	5465	CA	LEU	C	253	93.977	37.197	27.787	1.000	17.32
ATOM	5466	CB	LEU	C	253	94.418	38.517	27.174	1.000	15.25
ATOM	5467	CG	LEU	C	253	95.903	38.874	27.253	1.000	21.28
ATOM	5468	CD1	LEU	C	253	96.755	37.831	26.548	1.000	15.73
ATOM	5469	CD2	LEU	C	253	96.176	40.255	26.668	1.000	15.80
ATOM	5470	C	LEU	C	253	94.202	37.152	29.293	1.000	20.34
ATOM	5471	O	LEU	C	253	94.062	38.178	29.959	1.000	18.61
ATOM	5472	N	ASP	C	254	94.497	35.971	29.835	1.000	18.39
ATOM	5473	CA	ASP	C	254	94.326	35.800	31.271	1.000	19.65
ATOM	5474	CB	ASP	C	254	92.830	35.489	31.527	1.000	16.16
ATOM	5475	CG	ASP	C	254	92.380	34.224	30.832	1.000	21.05
ATOM	5476	OD1	ASP	C	254	93.218	33.505	30.235	1.000	19.41
ATOM	5477	OD2	ASP	C	254	91.166	33.922	30.868	1.000	21.82
ATOM	5478	C	ASP	C	254	95.142	34.697	31.910	1.000	21.58
ATOM	5479	O	ASP	C	254	94.835	34.302	33.044	1.000	21.93
ATOM	5480	N	GLY	C	255	96.168	34.157	31.255	1.000	19.98
ATOM	5481	CA	GLY	C	255	97.016	33.180	31.921	1.000	13.04
ATOM	5482	C	GLY	C	255	96.292	31.902	32.291	1.000	23.38
ATOM	5483	O	GLY	C	255	96.812	31.094	33.075	1.000	21.76
ATOM	5484	N	ALA	C	256	95.114	31.704	31.719	1.000	23.49
ATOM	5485	CA	ALA	C	256	94.304	30.505	31.855	1.000	20.27

ATOM	5486	CB	ALA	C	256	95.173	29.251	31.752	1.000	18.94
ATOM	5487	C	ALA	C	256	93.516	30.495	33.165	1.000	18.75
ATOM	5488	O	ALA	C	256	92.982	29.464	33.581	1.000	17.98
ATOM	5489	N	ILE	C	257	93.419	31.643	33.826	1.000	15.35
ATOM	5490	CA	ILE	C	257	92.646	31.696	35.059	1.000	21.12
ATOM	5491	CB	ILE	C	257	92.908	33.007	35.832	1.000	21.24
ATOM	5492	CG2	ILE	C	257	92.148	34.173	35.216	1.000	23.06
ATOM	5493	CG1	ILE	C	257	92.613	32.911	37.335	1.000	19.13
ATOM	5494	CD1	ILE	C	257	92.930	34.191	38.084	1.000	19.06
ATOM	5495	C	ILE	C	257	91.155	31.560	34.783	1.000	25.65
ATOM	5496	O	ILE	C	257	90.677	31.973	33.729	1.000	19.69
ATOM	5497	N	ARG	C	258	90.438	30.984	35.738	1.000	24.39
ATOM	5498	CA	ARG	C	258	88.975	30.985	35.778	1.000	18.78
ATOM	5499	CB	ARG	C	258	88.376	29.617	35.523	1.000	17.15
ATOM	5500	CG	ARG	C	258	88.687	28.985	34.162	1.000	21.49
ATOM	5501	CD	ARG	C	258	88.076	29.820	33.052	1.000	23.58
ATOM	5502	NE	ARG	C	258	88.246	29.289	31.709	1.000	23.32
ATOM	5503	CZ	ARG	C	258	89.257	29.573	30.900	1.000	21.26
ATOM	5504	NH1	ARG	C	258	89.306	29.031	29.691	1.000	17.94
ATOM	5505	NH2	ARG	C	258	90.225	30.393	31.296	1.000	17.93
ATOM	5506	C	ARG	C	258	88.576	31.524	37.157	1.000	22.89
ATOM	5507	O	ARG	C	258	88.988	30.986	38.188	1.000	18.51
ATOM	5508	N	MET	C	259	87.810	32.604	37.219	1.000	22.41
ATOM	5509	CA	MET	C	259	87.600	33.245	38.516	1.000	22.89
ATOM	5510	CB	MET	C	259	87.145	34.696	38.321	1.000	23.35
ATOM	5511	CG	MET	C	259	88.029	35.503	37.385	1.000	27.42
ATOM	5512	SD	MET	C	259	89.757	35.470	37.881	1.000	26.67
ATOM	5513	CE	MET	C	259	89.731	36.436	39.387	1.000	27.72
ATOM	5514	C	MET	C	259	86.575	32.521	39.377	1.000	26.70
ATOM	5515	O	MET	C	259	85.478	32.178	38.947	1.000	25.54
ATOM	5516	N	GLN	C	260	86.946	32.305	40.631	1.000	30.71
ATOM	5517	CA	GLN	C	260	86.079	31.691	41.635	1.000	25.02
ATOM	5518	CB	GLN	C	260	86.967	30.983	42.653	1.000	27.72
ATOM	5519	CG	GLN	C	260	87.077	29.489	42.447	1.000	41.57
ATOM	5520	CD	GLN	C	260	86.158	28.897	41.402	1.000	49.91
ATOM	5521	OE1	GLN	C	260	85.118	28.302	41.686	1.000	38.22
ATOM	5522	NE2	GLN	C	260	86.536	29.040	40.134	1.000	67.27
ATOM	5523	C	GLN	C	260	85.182	32.743	42.277	1.000	25.92
ATOM	5524	O	GLN	C	260	85.403	33.942	42.054	1.000	24.17
ATOM	5525	N	PRO	C	261	84.165	32.365	43.041	1.000	23.99
ATOM	5526	CD	PRO	C	261	83.744	30.987	43.359	1.000	24.97
ATOM	5527	CA	PRO	C	261	83.289	33.372	43.662	1.000	22.83
ATOM	5528	CB	PRO	C	261	82.411	32.512	44.584	1.000	24.86
ATOM	5529	CG	PRO	C	261	82.334	31.209	43.849	1.000	25.45
ATOM	5530	C	PRO	C	261	84.067	34.409	44.457	1.000	22.13
ATOM	5531	OT1	PRO	C	261	85.046	33.998	45.112	1.000	24.75
ATOM	5532	OT2	PRO	C	261	83.742	35.620	44.416	1.000	17.73
ATOM	5533	PN	LIG	C	262	92.798	49.871	33.096	1.000	25.36
ATOM	5534	O1N	LIG	C	262	93.331	48.582	33.757	1.000	23.33
ATOM	5535	O2N	LIG	C	262	93.836	50.420	32.122	1.000	22.34
ATOM	5536	O3P	LIG	C	262	92.507	50.871	34.244	1.000	30.26
ATOM	5537	O5M	LIG	C	262	91.425	49.583	32.332	1.000	24.41
ATOM	5538	C5M	LIG	C	262	91.307	49.563	30.881	1.000	31.36
ATOM	5539	C4M	LIG	C	262	90.121	48.645	30.417	1.000	32.73
ATOM	5540	O4M	LIG	C	262	90.448	47.263	30.689	1.000	32.21
ATOM	5541	C3M	LIG	C	262	88.788	48.924	31.157	1.000	30.15
ATOM	5542	O3M	LIG	C	262	87.691	48.676	30.252	1.000	18.36
ATOM	5543	C2M	LIG	C	262	88.844	47.876	32.303	1.000	22.20
ATOM	5544	O2M	LIG	C	262	87.499	47.638	32.766	1.000	20.27
ATOM	5545	C1M	LIG	C	262	89.414	46.665	31.519	1.000	26.13
ATOM	5546	N1N	LIG	C	262	89.909	45.522	32.334	1.000	20.70

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ATOM   5547  C6N LIG C 262      89.174  44.261  32.234 1.000 15.32
ATOM   5548  C5N LIG C 262      89.567  43.176  32.919 1.000 17.17
ATOM   5549  C4N LIG C 262      90.602  43.316  34.065 1.000 24.88
ATOM   5550  C3N LIG C 262      91.525  44.563  33.874 1.000 22.18
ATOM   5551  C2N LIG C 262      91.080  45.645  33.211 1.000 20.26
ATOM   5552  C7N LIG C 262      92.742  44.623  34.786 1.000 15.83
ATOM   5553  O7N LIG C 262      93.089  43.625  35.432 1.000 23.87
ATOM   5554  N7N LIG C 262      93.389  45.767  34.842 1.000 19.65
ATOM   5555  PA  LIG C 262      92.957  52.330  34.413 1.000 25.29
ATOM   5556  O1A LIG C 262      92.097  52.960  35.526 1.000 22.89
ATOM   5557  O2A LIG C 262      94.442  52.459  34.747 1.000 23.14
ATOM   5558  O5B LIG C 262      92.661  53.176  33.089 1.000 24.87
ATOM   5559  C5B LIG C 262      91.287  53.396  32.644 1.000 23.91
ATOM   5560  C4B LIG C 262      91.188  54.791  31.966 1.000 22.53
ATOM   5561  O4B LIG C 262      89.830  55.059  31.517 1.000 24.50
ATOM   5562  C3B LIG C 262      91.629  55.950  32.901 1.000 25.27
ATOM   5563  O3B LIG C 262      92.747  56.674  32.359 1.000 23.62
ATOM   5564  C2B LIG C 262      90.370  56.828  32.945 1.000 24.04
ATOM   5565  O2B LIG C 262      90.615  58.207  33.212 1.000 22.80
ATOM   5566  C1B LIG C 262      89.689  56.509  31.591 1.000 25.73
ATOM   5567  N9A LIG C 262      88.235  56.865  31.670 1.000 25.45
ATOM   5568  C4A LIG C 262      87.449  57.586  30.775 1.000 27.43
ATOM   5569  N3A LIG C 262      87.701  58.238  29.493 1.000 22.57
ATOM   5570  C2A LIG C 262      86.659  58.824  28.955 1.000 29.08
ATOM   5571  N1A LIG C 262      85.421  58.916  29.403 1.000 34.71
ATOM   5572  C6A LIG C 262      85.094  58.361  30.556 1.000 25.70
ATOM   5573  C5A LIG C 262      86.096  57.654  31.327 1.000 25.70
ATOM   5574  N7A LIG C 262      86.008  56.994  32.545 1.000 27.04
ATOM   5575  C8A LIG C 262      87.303  56.572  32.659 1.000 22.87
ATOM   5576  N6A LIG C 262      83.874  58.533  31.055 1.000 21.84
ATOM   5577  C   LIG C 262      87.768  44.396  41.110 1.000 44.98
ATOM   5578  C1  LIG C 262      86.511  43.552  41.617 1.000 48.30
ATOM   5579  N   LIG C 262      86.430  43.126  42.940 1.000 48.50
ATOM   5580  O   LIG C 262      85.605  43.293  40.797 1.000 65.58
ATOM   5581  C2  LIG C 262      87.563  43.453  43.877 1.000 51.16
ATOM   5582  C3  LIG C 262      88.661  42.332  43.896 1.000 52.13
ATOM   5583  C4  LIG C 262      85.251  42.324  43.394 1.000 42.63
ATOM   5584  C5  LIG C 262      85.547  40.804  43.209 1.000 53.20
ATOM   5585  C6  LIG C 262      86.952  40.386  43.681 1.000 61.97
ATOM   5586  C7  LIG C 262      88.182  41.098  43.084 1.000 58.52
ATOM   5587  C8  LIG C 262      87.768  45.903  41.567 1.000 36.21
ATOM   5588  C9  LIG C 262      89.004  46.569  41.608 1.000 38.49
ATOM   5589  C10 LIG C 262      89.074  47.902  41.999 1.000 36.24
ATOM   5590  C11 LIG C 262      87.912  48.581  42.357 1.000 39.07
ATOM   5591  C12 LIG C 262      86.681  47.933  42.332 1.000 39.17
ATOM   5592  C13 LIG C 262      86.610  46.607  41.906 1.000 37.44
ATOM   5593  C15 LIG C 262      87.326  45.081  38.785 1.000 36.27
ATOM   5594  N1  LIG C 262      87.409  45.213  37.494 1.000 33.45
ATOM   5595  C16 LIG C 262      88.460  44.477  36.824 1.000 31.46
ATOM   5596  C17 LIG C 262      89.357  43.657  37.546 1.000 38.18
ATOM   5597  C18 LIG C 262      89.189  43.536  39.079 1.000 40.16
ATOM   5598  N2  LIG C 262      88.040  44.343  39.596 1.000 42.60
ATOM   5599  S   LIG C 262      90.274  42.506  40.037 1.000 37.80
ATOM   5600  C19 LIG C 262      90.242  43.067  36.680 1.000 36.22
ATOM   5601  N3  LIG C 262      89.906  43.510  35.401 1.000 27.95
ATOM   5602  N4  LIG C 262      88.875  44.403  35.515 1.000 28.88
ATOM   5603  CB  SER D   7      53.786  21.308  43.599 1.000 44.31
ATOM   5604  C   SER D   7      55.174  23.307  43.111 1.000 42.72
ATOM   5605  O   SER D   7      55.885  23.720  44.027 1.000 47.89
ATOM   5606  N   SER D   7      56.230  21.111  43.360 1.000 57.68
ATOM   5607  CA  SER D   7      55.040  21.806  42.892 1.000 49.63
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ATOM	5608	N	VAL	D	8	54.494	24.107	42.293	1.000	38.26
ATOM	5609	CA	VAL	D	8	54.523	25.551	42.518	1.000	36.32
ATOM	5610	CB	VAL	D	8	54.535	26.343	41.198	1.000	39.50
ATOM	5611	CG1	VAL	D	8	55.802	26.044	40.408	1.000	35.22
ATOM	5612	CG2	VAL	D	8	53.297	26.026	40.374	1.000	29.19
ATOM	5613	C	VAL	D	8	53.322	25.979	43.354	1.000	30.87
ATOM	5614	O	VAL	D	8	53.141	27.156	43.662	1.000	32.37
ATOM	5615	N	LYS	D	9	52.480	25.013	43.716	1.000	26.77
ATOM	5616	CA	LYS	D	9	51.272	25.363	44.468	1.000	29.29
ATOM	5617	CB	LYS	D	9	50.441	24.118	44.724	1.000	28.07
ATOM	5618	C	LYS	D	9	51.638	26.078	45.761	1.000	31.62
ATOM	5619	O	LYS	D	9	52.452	25.599	46.552	1.000	32.26
ATOM	5620	N	GLY	D	10	51.051	27.248	45.989	1.000	34.81
ATOM	5621	CA	GLY	D	10	51.322	28.015	47.187	1.000	30.81
ATOM	5622	C	GLY	D	10	52.453	29.007	47.078	1.000	33.23
ATOM	5623	O	GLY	D	10	52.595	29.858	47.972	1.000	38.22
ATOM	5624	N	LEU	D	11	53.281	28.950	46.032	1.000	29.06
ATOM	5625	CA	LEU	D	11	54.341	29.952	45.907	1.000	27.91
ATOM	5626	CB	LEU	D	11	55.443	29.526	44.933	1.000	26.09
ATOM	5627	CG	LEU	D	11	56.089	28.165	45.194	1.000	33.28
ATOM	5628	CD1	LEU	D	11	57.196	27.900	44.183	1.000	37.73
ATOM	5629	CD2	LEU	D	11	56.621	28.095	46.615	1.000	29.82
ATOM	5630	C	LEU	D	11	53.763	31.284	45.430	1.000	24.63
ATOM	5631	O	LEU	D	11	52.771	31.295	44.706	1.000	23.43
ATOM	5632	N	VAL	D	12	54.404	32.369	45.829	1.000	21.94
ATOM	5633	CA	VAL	D	12	54.083	33.706	45.366	1.000	23.89
ATOM	5634	CB	VAL	D	12	53.982	34.683	46.548	1.000	26.77
ATOM	5635	CG1	VAL	D	12	53.686	36.091	46.052	1.000	23.82
ATOM	5636	CG2	VAL	D	12	52.918	34.211	47.534	1.000	26.90
ATOM	5637	C	VAL	D	12	55.133	34.211	44.377	1.000	29.60
ATOM	5638	O	VAL	D	12	56.302	34.357	44.727	1.000	26.47
ATOM	5639	N	ALA	D	13	54.713	34.480	43.144	1.000	29.25
ATOM	5640	CA	ALA	D	13	55.601	34.896	42.073	1.000	23.99
ATOM	5641	CB	ALA	D	13	55.430	33.937	40.899	1.000	23.74
ATOM	5642	C	ALA	D	13	55.353	36.314	41.589	1.000	25.67
ATOM	5643	O	ALA	D	13	54.228	36.704	41.266	1.000	30.62
ATOM	5644	N	VAL	D	14	56.414	37.106	41.512	1.000	19.86
ATOM	5645	CA	VAL	D	14	56.311	38.445	40.929	1.000	21.74
ATOM	5646	CB	VAL	D	14	57.112	39.480	41.716	1.000	24.02
ATOM	5647	CG1	VAL	D	14	57.244	40.807	40.988	1.000	22.87
ATOM	5648	CG2	VAL	D	14	56.442	39.698	43.074	1.000	26.38
ATOM	5649	C	VAL	D	14	56.791	38.337	39.483	1.000	28.01
ATOM	5650	O	VAL	D	14	57.918	37.883	39.272	1.000	27.09
ATOM	5651	N	ILE	D	15	55.940	38.706	38.537	1.000	23.88
ATOM	5652	CA	ILE	D	15	56.238	38.541	37.107	1.000	22.25
ATOM	5653	CB	ILE	D	15	55.209	37.576	36.480	1.000	24.05
ATOM	5654	CG2	ILE	D	15	55.384	37.441	34.975	1.000	24.05
ATOM	5655	CG1	ILE	D	15	55.217	36.202	37.157	1.000	25.78
ATOM	5656	CD1	ILE	D	15	54.092	35.286	36.735	1.000	27.73
ATOM	5657	C	ILE	D	15	56.236	39.867	36.377	1.000	23.91
ATOM	5658	O	ILE	D	15	55.197	40.468	36.084	1.000	22.19
ATOM	5659	N	THR	D	16	57.422	40.381	36.057	1.000	22.27
ATOM	5660	CA	THR	D	16	57.473	41.647	35.332	1.000	21.40
ATOM	5661	CB	THR	D	16	58.852	42.310	35.441	1.000	22.25
ATOM	5662	OG1	THR	D	16	59.739	41.705	34.490	1.000	20.62
ATOM	5663	CG2	THR	D	16	59.449	42.046	36.817	1.000	18.29
ATOM	5664	C	THR	D	16	57.118	41.385	33.869	1.000	20.63
ATOM	5665	O	THR	D	16	57.369	40.282	33.371	1.000	22.61
ATOM	5666	N	GLY	D	17	56.532	42.383	33.216	1.000	21.88
ATOM	5667	CA	GLY	D	17	56.018	42.192	31.864	1.000	23.48
ATOM	5668	C	GLY	D	17	54.858	41.203	31.908	1.000	26.78

ATOM	5669	O	GLY	D	17	54.552	40.526	30.929	1.000	21.03
ATOM	5670	N	GLY	D	18	54.204	41.113	33.073	1.000	24.25
ATOM	5671	CA	GLY	D	18	53.134	40.161	33.270	1.000	20.46
ATOM	5672	C	GLY	D	18	51.874	40.412	32.475	1.000	23.10
ATOM	5673	O	GLY	D	18	51.018	39.524	32.358	1.000	23.13
ATOM	5674	N	ALA	D	19	51.687	41.600	31.895	1.000	23.45
ATOM	5675	CA	ALA	D	19	50.447	41.865	31.168	1.000	23.54
ATOM	5676	CB	ALA	D	19	50.253	43.372	31.030	1.000	20.54
ATOM	5677	C	ALA	D	19	50.413	41.221	29.793	1.000	30.19
ATOM	5678	O	ALA	D	19	49.368	41.176	29.136	1.000	31.79
ATOM	5679	N	SER	D	20	51.542	40.719	29.294	1.000	26.00
ATOM	5680	CA	SER	D	20	51.553	40.290	27.891	1.000	25.37
ATOM	5681	CB	SER	D	20	51.882	41.515	27.031	1.000	27.24
ATOM	5682	OG	SER	D	20	52.044	41.220	25.656	1.000	28.53
ATOM	5683	C	SER	D	20	52.538	39.156	27.637	1.000	29.51
ATOM	5684	O	SER	D	20	53.405	38.868	28.468	1.000	26.87
ATOM	5685	N	GLY	D	21	52.401	38.522	26.478	1.000	26.73
ATOM	5686	CA	GLY	D	21	53.282	37.503	25.962	1.000	23.45
ATOM	5687	C	GLY	D	21	53.811	36.496	26.953	1.000	27.95
ATOM	5688	O	GLY	D	21	53.075	35.789	27.642	1.000	22.21
ATOM	5689	N	LEU	D	22	55.138	36.386	27.043	1.000	23.99
ATOM	5690	CA	LEU	D	22	55.762	35.360	27.868	1.000	20.60
ATOM	5691	CB	LEU	D	22	57.284	35.376	27.669	1.000	21.35
ATOM	5692	CG	LEU	D	22	57.781	35.299	26.219	1.000	20.42
ATOM	5693	CD1	LEU	D	22	59.304	35.218	26.169	1.000	17.83
ATOM	5694	CD2	LEU	D	22	57.149	34.113	25.507	1.000	17.30
ATOM	5695	C	LEU	D	22	55.418	35.543	29.342	1.000	18.64
ATOM	5696	O	LEU	D	22	55.110	34.564	30.024	1.000	23.17
ATOM	5697	N	GLY	D	23	55.470	36.772	29.837	1.000	20.39
ATOM	5698	CA	GLY	D	23	55.160	37.003	31.250	1.000	26.89
ATOM	5699	C	GLY	D	23	53.729	36.587	31.565	1.000	28.07
ATOM	5700	O	GLY	D	23	53.461	35.908	32.559	1.000	23.44
ATOM	5701	N	LEU	D	24	52.798	36.985	30.692	1.000	20.84
ATOM	5702	CA	LEU	D	24	51.399	36.626	30.897	1.000	20.18
ATOM	5703	CB	LEU	D	24	50.506	37.238	29.813	1.000	20.69
ATOM	5704	CG	LEU	D	24	49.044	36.782	29.835	1.000	23.66
ATOM	5705	CD1	LEU	D	24	48.396	37.166	31.159	1.000	22.35
ATOM	5706	CD2	LEU	D	24	48.263	37.369	28.667	1.000	23.89
ATOM	5707	C	LEU	D	24	51.211	35.116	30.911	1.000	23.44
ATOM	5708	O	LEU	D	24	50.522	34.570	31.770	1.000	23.82
ATOM	5709	N	ALA	D	25	51.827	34.444	29.936	1.000	25.43
ATOM	5710	CA	ALA	D	25	51.716	32.995	29.824	1.000	20.00
ATOM	5711	CB	ALA	D	25	52.417	32.500	28.560	1.000	22.34
ATOM	5712	C	ALA	D	25	52.290	32.296	31.049	1.000	24.36
ATOM	5713	O	ALA	D	25	51.801	31.264	31.514	1.000	26.51
ATOM	5714	N	THR	D	26	53.360	32.880	31.582	1.000	24.33
ATOM	5715	CA	THR	D	26	53.939	32.353	32.816	1.000	22.92
ATOM	5716	CB	THR	D	26	55.245	33.096	33.133	1.000	25.10
ATOM	5717	OG1	THR	D	26	56.140	32.896	32.023	1.000	22.29
ATOM	5718	CG2	THR	D	26	55.950	32.532	34.356	1.000	18.54
ATOM	5719	C	THR	D	26	52.926	32.461	33.948	1.000	21.41
ATOM	5720	O	THR	D	26	52.680	31.516	34.693	1.000	25.68
ATOM	5721	N	ALA	D	27	52.308	33.630	34.070	1.000	21.76
ATOM	5722	CA	ALA	D	27	51.305	33.847	35.110	1.000	25.16
ATOM	5723	CB	ALA	D	27	50.825	35.288	35.048	1.000	26.09
ATOM	5724	C	ALA	D	27	50.158	32.863	34.969	1.000	27.42
ATOM	5725	O	ALA	D	27	49.716	32.221	35.925	1.000	23.96
ATOM	5726	N	GLU	D	28	49.668	32.736	33.740	1.000	23.93
ATOM	5727	CA	GLU	D	28	48.597	31.791	33.452	1.000	26.72
ATOM	5728	CB	GLU	D	28	48.315	31.748	31.938	1.000	24.65
ATOM	5729	CG	GLU	D	28	47.483	32.934	31.478	1.000	29.35

ATOM	5730	CD	GLU	D	28	47.321	33.034	29.978	1.000	36.70
ATOM	5731	OE1	GLU	D	28	46.571	33.939	29.548	1.000	40.71
ATOM	5732	OE2	GLU	D	28	47.928	32.235	29.233	1.000	41.27
ATOM	5733	C	GLU	D	28	48.941	30.392	33.936	1.000	29.67
ATOM	5734	O	GLU	D	28	48.133	29.698	34.550	1.000	23.91
ATOM	5735	N	ARG	D	29	50.172	29.962	33.633	1.000	26.23
ATOM	5736	CA	ARG	D	29	50.523	28.585	33.958	1.000	23.90
ATOM	5737	CB	ARG	D	29	51.803	28.148	33.242	1.000	23.31
ATOM	5738	CG	ARG	D	29	52.083	26.668	33.457	1.000	25.31
ATOM	5739	CD	ARG	D	29	53.346	26.249	32.723	1.000	26.40
ATOM	5740	NE	ARG	D	29	53.683	24.857	33.006	1.000	26.23
ATOM	5741	CZ	ARG	D	29	53.139	23.821	32.384	1.000	30.28
ATOM	5742	NH1	ARG	D	29	53.514	22.595	32.717	1.000	31.68
ATOM	5743	NH2	ARG	D	29	52.228	23.996	31.437	1.000	28.63
ATOM	5744	C	ARG	D	29	50.683	28.409	35.458	1.000	28.09
ATOM	5745	O	ARG	D	29	50.170	27.451	36.043	1.000	34.40
ATOM	5746	N	LEU	D	30	51.387	29.336	36.106	1.000	23.92
ATOM	5747	CA	LEU	D	30	51.611	29.157	37.541	1.000	25.83
ATOM	5748	CB	LEU	D	30	52.632	30.169	38.042	1.000	28.15
ATOM	5749	CG	LEU	D	30	54.051	30.067	37.460	1.000	26.33
ATOM	5750	CD1	LEU	D	30	54.925	31.168	38.048	1.000	18.28
ATOM	5751	CD2	LEU	D	30	54.641	28.690	37.714	1.000	25.83
ATOM	5752	C	LEU	D	30	50.301	29.263	38.310	1.000	32.25
ATOM	5753	O	LEU	D	30	50.025	28.452	39.205	1.000	32.13
ATOM	5754	N	VAL	D	31	49.483	30.260	37.968	1.000	28.07
ATOM	5755	CA	VAL	D	31	48.206	30.370	38.681	1.000	30.63
ATOM	5756	CB	VAL	D	31	47.387	31.593	38.255	1.000	33.71
ATOM	5757	CG1	VAL	D	31	45.995	31.535	38.883	1.000	43.21
ATOM	5758	CG2	VAL	D	31	48.069	32.889	38.652	1.000	28.34
ATOM	5759	C	VAL	D	31	47.410	29.084	38.467	1.000	33.51
ATOM	5760	O	VAL	D	31	46.844	28.504	39.398	1.000	34.58
ATOM	5761	N	GLY	D	32	47.411	28.612	37.220	1.000	27.31
ATOM	5762	CA	GLY	D	32	46.738	27.367	36.888	1.000	26.97
ATOM	5763	C	GLY	D	32	47.258	26.226	37.749	1.000	36.82
ATOM	5764	O	GLY	D	32	46.510	25.290	38.045	1.000	33.72
ATOM	5765	N	GLN	D	33	48.523	26.305	38.162	1.000	34.44
ATOM	5766	CA	GLN	D	33	49.118	25.225	38.942	1.000	36.67
ATOM	5767	CB	GLN	D	33	50.598	25.042	38.600	1.000	40.13
ATOM	5768	CG	GLN	D	33	50.936	24.989	37.130	1.000	44.78
ATOM	5769	CD	GLN	D	33	50.949	23.598	36.543	1.000	49.17
ATOM	5770	OE1	GLN	D	33	50.361	22.654	37.070	1.000	57.52
ATOM	5771	NE2	GLN	D	33	51.641	23.474	35.415	1.000	56.34
ATOM	5772	C	GLN	D	33	48.992	25.447	40.449	1.000	34.31
ATOM	5773	O	GLN	D	33	49.590	24.700	41.232	1.000	32.93
ATOM	5774	N	GLY	D	34	48.233	26.456	40.867	1.000	33.15
ATOM	5775	CA	GLY	D	34	48.047	26.729	42.280	1.000	29.31
ATOM	5776	C	GLY	D	34	48.915	27.821	42.841	1.000	32.67
ATOM	5777	O	GLY	D	34	48.846	28.101	44.047	1.000	33.83
ATOM	5778	N	ALA	D	35	49.757	28.501	42.055	1.000	26.73
ATOM	5779	CA	ALA	D	35	50.585	29.543	42.668	1.000	22.64
ATOM	5780	CB	ALA	D	35	51.868	29.730	41.868	1.000	25.14
ATOM	5781	C	ALA	D	35	49.853	30.869	42.767	1.000	22.80
ATOM	5782	O	ALA	D	35	48.780	31.033	42.187	1.000	27.59
ATOM	5783	N	SER	D	36	50.425	31.840	43.480	1.000	24.27
ATOM	5784	CA	SER	D	36	49.868	33.188	43.417	1.000	29.41
ATOM	5785	CB	SER	D	36	49.675	33.820	44.794	1.000	28.13
ATOM	5786	OG	SER	D	36	48.888	33.000	45.629	1.000	35.10
ATOM	5787	C	SER	D	36	50.780	34.070	42.566	1.000	34.62
ATOM	5788	O	SER	D	36	52.001	33.922	42.600	1.000	26.36
ATOM	5789	N	ALA	D	37	50.183	34.989	41.804	1.000	30.49
ATOM	5790	CA	ALA	D	37	51.027	35.871	41.007	1.000	29.17

ATOM	5791	CB	ALA	D	37	50.974	35.474	39.531	1.000	29.10
ATOM	5792	C	ALA	D	37	50.639	37.334	41.161	1.000	24.61
ATOM	5793	O	ALA	D	37	49.474	37.691	41.294	1.000	29.85
ATOM	5794	N	VAL	D	38	51.665	38.171	41.122	1.000	23.25
ATOM	5795	CA	VAL	D	38	51.557	39.605	40.983	1.000	22.55
ATOM	5796	CB	VAL	D	38	52.353	40.353	42.059	1.000	26.24
ATOM	5797	CG1	VAL	D	38	52.402	41.841	41.739	1.000	25.94
ATOM	5798	CG2	VAL	D	38	51.759	40.097	43.435	1.000	30.97
ATOM	5799	C	VAL	D	38	52.098	40.009	39.606	1.000	29.14
ATOM	5800	O	VAL	D	38	53.286	39.804	39.349	1.000	22.57
ATOM	5801	N	LEU	D	39	51.233	40.554	38.765	1.000	27.12
ATOM	5802	CA	LEU	D	39	51.591	41.039	37.446	1.000	24.31
ATOM	5803	CB	LEU	D	39	50.407	41.028	36.480	1.000	23.52
ATOM	5804	CG	LEU	D	39	49.520	39.788	36.443	1.000	22.65
ATOM	5805	CD1	LEU	D	39	48.490	39.894	35.319	1.000	23.91
ATOM	5806	CD2	LEU	D	39	50.323	38.512	36.274	1.000	20.23
ATOM	5807	C	LEU	D	39	52.135	42.463	37.552	1.000	26.76
ATOM	5808	O	LEU	D	39	51.395	43.411	37.806	1.000	27.20
ATOM	5809	N	LEU	D	40	53.446	42.591	37.357	1.000	24.31
ATOM	5810	CA	LEU	D	40	54.093	43.898	37.390	1.000	21.37
ATOM	5811	CB	LEU	D	40	55.397	43.828	38.163	1.000	17.64
ATOM	5812	CG	LEU	D	40	56.086	45.095	38.628	1.000	25.08
ATOM	5813	CD1	LEU	D	40	57.124	44.741	39.693	1.000	28.62
ATOM	5814	CD2	LEU	D	40	56.791	45.854	37.505	1.000	26.98
ATOM	5815	C	LEU	D	40	54.300	44.376	35.954	1.000	27.49
ATOM	5816	O	LEU	D	40	55.085	43.804	35.204	1.000	25.14
ATOM	5817	N	ASP	D	41	53.609	45.447	35.588	1.000	30.57
ATOM	5818	CA	ASP	D	41	53.638	45.950	34.221	1.000	26.01
ATOM	5819	CB	ASP	D	41	52.768	45.058	33.334	1.000	20.45
ATOM	5820	CG	ASP	D	41	53.280	45.012	31.903	1.000	26.61
ATOM	5821	OD1	ASP	D	41	53.563	46.116	31.385	1.000	25.97
ATOM	5822	OD2	ASP	D	41	53.385	43.906	31.331	1.000	23.68
ATOM	5823	C	ASP	D	41	53.181	47.404	34.179	1.000	29.66
ATOM	5824	O	ASP	D	41	52.708	47.942	35.186	1.000	24.67
ATOM	5825	N	LEU	D	42	53.341	48.039	33.022	1.000	26.33
ATOM	5826	CA	LEU	D	42	53.102	49.477	32.902	1.000	28.41
ATOM	5827	CB	LEU	D	42	53.603	49.989	31.549	1.000	26.22
ATOM	5828	CG	LEU	D	42	55.111	49.853	31.294	1.000	29.25
ATOM	5829	CD1	LEU	D	42	55.433	50.075	29.825	1.000	25.00
ATOM	5830	CD2	LEU	D	42	55.908	50.811	32.166	1.000	18.73
ATOM	5831	C	LEU	D	42	51.623	49.797	33.102	1.000	25.26
ATOM	5832	O	LEU	D	42	50.789	48.919	32.898	1.000	19.04
ATOM	5833	N	PRO	D	43	51.318	51.028	33.489	1.000	30.00
ATOM	5834	CD	PRO	D	43	52.263	52.138	33.658	1.000	29.98
ATOM	5835	CA	PRO	D	43	49.934	51.405	33.789	1.000	31.92
ATOM	5836	CB	PRO	D	43	50.025	52.856	34.254	1.000	27.79
ATOM	5837	CG	PRO	D	43	51.444	53.272	34.182	1.000	33.26
ATOM	5838	C	PRO	D	43	49.022	51.329	32.565	1.000	31.69
ATOM	5839	O	PRO	D	43	47.857	50.955	32.686	1.000	32.45
ATOM	5840	N	ASN	D	44	49.559	51.699	31.407	1.000	29.00
ATOM	5841	CA	ASN	D	44	48.730	51.669	30.199	1.000	39.63
ATOM	5842	CB	ASN	D	44	49.250	52.700	29.196	1.000	46.89
ATOM	5843	CG	ASN	D	44	50.723	52.510	28.894	1.000	51.07
ATOM	5844	OD1	ASN	D	44	51.612	53.038	29.546	1.000	67.13
ATOM	5845	ND2	ASN	D	44	50.973	51.715	27.861	1.000	61.81
ATOM	5846	C	ASN	D	44	48.686	50.276	29.595	1.000	36.13
ATOM	5847	O	ASN	D	44	48.082	50.038	28.548	1.000	38.91
ATOM	5848	N	SER	D	45	49.338	49.310	30.242	1.000	32.04
ATOM	5849	CA	SER	D	45	49.150	47.933	29.771	1.000	32.95
ATOM	5850	CB	SER	D	45	50.283	47.018	30.216	1.000	32.23
ATOM	5851	OG	SER	D	45	50.313	46.891	31.627	1.000	27.59

ATOM	5852	C	SER	D	45	47.794	47.444	30.273	1.000	35.99
ATOM	5853	O	SER	D	45	47.174	48.092	31.123	1.000	65.28
ATOM	5854	N	GLY	D	46	47.305	46.319	29.762	1.000	33.63
ATOM	5855	CA	GLY	D	46	46.034	45.794	30.260	1.000	32.91
ATOM	5856	C	GLY	D	46	46.236	44.777	31.371	1.000	30.01
ATOM	5857	O	GLY	D	46	45.515	43.789	31.487	1.000	32.99
ATOM	5858	N	GLY	D	47	47.243	44.993	32.219	1.000	29.82
ATOM	5859	CA	GLY	D	47	47.540	44.036	33.276	1.000	31.13
ATOM	5860	C	GLY	D	47	46.400	43.836	34.250	1.000	30.46
ATOM	5861	O	GLY	D	47	46.091	42.704	34.629	1.000	29.55
ATOM	5862	N	GLU	D	48	45.764	44.926	34.673	1.000	31.20
ATOM	5863	CA	GLU	D	48	44.610	44.847	35.571	1.000	30.44
ATOM	5864	CB	GLU	D	48	44.007	46.232	35.788	1.000	34.81
ATOM	5865	CG	GLU	D	48	42.910	46.303	36.839	1.000	46.31
ATOM	5866	CD	GLU	D	48	43.264	45.576	38.121	1.000	57.55
ATOM	5867	OE1	GLU	D	48	42.788	44.440	38.332	1.000	64.75
ATOM	5868	OE2	GLU	D	48	44.023	46.137	38.941	1.000	70.34
ATOM	5869	C	GLU	D	48	43.578	43.881	35.000	1.000	31.02
ATOM	5870	O	GLU	D	48	43.094	42.976	35.674	1.000	32.79
ATOM	5871	N	ALA	D	49	43.253	44.080	33.719	1.000	31.35
ATOM	5872	CA	ALA	D	49	42.284	43.191	33.085	1.000	32.00
ATOM	5873	CB	ALA	D	49	41.990	43.667	31.667	1.000	32.18
ATOM	5874	C	ALA	D	49	42.772	41.751	33.072	1.000	30.17
ATOM	5875	O	ALA	D	49	41.971	40.815	33.149	1.000	23.01
ATOM	5876	N	GLN	D	50	44.091	41.551	32.957	1.000	28.22
ATOM	5877	CA	GLN	D	50	44.565	40.162	32.932	1.000	27.11
ATOM	5878	CB	GLN	D	50	45.975	40.035	32.359	1.000	27.94
ATOM	5879	CG	GLN	D	50	46.147	40.500	30.926	1.000	27.74
ATOM	5880	CD	GLN	D	50	45.418	39.660	29.904	1.000	32.10
ATOM	5881	OE1	GLN	D	50	45.275	40.065	28.743	1.000	48.53
ATOM	5882	NE2	GLN	D	50	44.946	38.480	30.284	1.000	25.90
ATOM	5883	C	GLN	D	50	44.521	39.579	34.341	1.000	24.98
ATOM	5884	O	GLN	D	50	44.135	38.425	34.537	1.000	29.20
ATOM	5885	N	ALA	D	51	44.917	40.376	35.331	1.000	25.27
ATOM	5886	CA	ALA	D	51	44.834	39.906	36.715	1.000	28.77
ATOM	5887	CB	ALA	D	51	45.420	40.936	37.659	1.000	27.87
ATOM	5888	C	ALA	D	51	43.385	39.585	37.072	1.000	31.97
ATOM	5889	O	ALA	D	51	43.079	38.543	37.656	1.000	29.01
ATOM	5890	N	LYS	D	52	42.464	40.482	36.699	1.000	29.02
ATOM	5891	CA	LYS	D	52	41.060	40.239	37.044	1.000	33.68
ATOM	5892	CB	LYS	D	52	40.197	41.411	36.587	1.000	40.45
ATOM	5893	CG	LYS	D	52	38.775	41.054	36.190	1.000	51.10
ATOM	5894	CD	LYS	D	52	38.480	41.572	34.787	1.000	61.95
ATOM	5895	CE	LYS	D	52	38.743	40.511	33.728	1.000	61.99
ATOM	5896	NZ	LYS	D	52	39.088	41.105	32.407	1.000	39.68
ATOM	5897	C	LYS	D	52	40.579	38.918	36.457	1.000	32.76
ATOM	5898	O	LYS	D	52	39.896	38.129	37.111	1.000	30.38
ATOM	5899	N	LYS	D	53	40.949	38.658	35.205	1.000	31.19
ATOM	5900	CA	LYS	D	53	40.590	37.407	34.564	1.000	32.46
ATOM	5901	CB	LYS	D	53	41.041	37.418	33.103	1.000	35.74
ATOM	5902	C	LYS	D	53	41.200	36.197	35.253	1.000	35.48
ATOM	5903	O	LYS	D	53	40.652	35.092	35.205	1.000	38.08
ATOM	5904	N	LEU	D	54	42.362	36.356	35.893	1.000	36.19
ATOM	5905	CA	LEU	D	54	43.025	35.150	36.405	1.000	33.49
ATOM	5906	CB	LEU	D	54	44.546	35.358	36.360	1.000	29.70
ATOM	5907	CG	LEU	D	54	45.159	35.051	34.981	1.000	27.61
ATOM	5908	CD1	LEU	D	54	46.577	35.580	34.901	1.000	29.55
ATOM	5909	CD2	LEU	D	54	45.092	33.561	34.695	1.000	28.19
ATOM	5910	C	LEU	D	54	42.555	34.759	37.792	1.000	31.35
ATOM	5911	O	LEU	D	54	42.955	33.725	38.330	1.000	37.80
ATOM	5912	N	GLY	D	55	41.686	35.562	38.406	1.000	34.60

ATOM	5913	CA	GLY	D	55	41.066	35.155	39.655	1.000	30.33
ATOM	5914	C	GLY	D	55	41.688	35.717	40.911	1.000	29.00
ATOM	5915	O	GLY	D	55	42.597	36.540	40.837	1.000	24.79
ATOM	5916	N	ASN	D	56	41.193	35.276	42.067	1.000	32.09
ATOM	5917	CA	ASN	D	56	41.627	35.767	43.363	1.000	38.75
ATOM	5918	CB	ASN	D	56	40.961	34.951	44.486	1.000	45.97
ATOM	5919	CG	ASN	D	56	39.487	35.267	44.619	1.000	51.94
ATOM	5920	OD1	ASN	D	56	38.654	34.375	44.752	1.000	60.92
ATOM	5921	ND2	ASN	D	56	39.196	36.563	44.586	1.000	52.08
ATOM	5922	C	ASN	D	56	43.133	35.681	43.581	1.000	35.02
ATOM	5923	O	ASN	D	56	43.683	36.439	44.372	1.000	37.38
ATOM	5924	N	ASN	D	57	43.777	34.739	42.899	1.000	36.49
ATOM	5925	CA	ASN	D	57	45.174	34.441	43.206	1.000	34.75
ATOM	5926	CB	ASN	D	57	45.380	32.927	43.173	1.000	32.81
ATOM	5927	CG	ASN	D	57	44.745	32.237	44.369	1.000	38.51
ATOM	5928	OD1	ASN	D	57	44.193	31.141	44.258	1.000	46.63
ATOM	5929	ND2	ASN	D	57	44.829	32.884	45.527	1.000	40.21
ATOM	5930	C	ASN	D	57	46.131	35.146	42.257	1.000	35.44
ATOM	5931	O	ASN	D	57	47.289	34.760	42.091	1.000	31.41
ATOM	5932	N	CYS	D	58	45.653	36.206	41.621	1.000	32.36
ATOM	5933	CA	CYS	D	58	46.481	37.022	40.743	1.000	29.88
ATOM	5934	CB	CYS	D	58	46.313	36.559	39.291	1.000	28.72
ATOM	5935	SG	CYS	D	58	47.357	37.481	38.125	1.000	29.29
ATOM	5936	C	CYS	D	58	46.128	38.494	40.875	1.000	27.06
ATOM	5937	O	CYS	D	58	44.974	38.899	40.701	1.000	27.89
ATOM	5938	N	VAL	D	59	47.097	39.347	41.185	1.000	26.91
ATOM	5939	CA	VAL	D	59	46.804	40.781	41.220	1.000	28.98
ATOM	5940	CB	VAL	D	59	46.808	41.346	42.650	1.000	32.06
ATOM	5941	CG1	VAL	D	59	45.829	40.568	43.524	1.000	34.22
ATOM	5942	CG2	VAL	D	59	48.215	41.316	43.222	1.000	31.06
ATOM	5943	C	VAL	D	59	47.810	41.570	40.383	1.000	31.95
ATOM	5944	O	VAL	D	59	48.907	41.095	40.090	1.000	29.89
ATOM	5945	N	PHE	D	60	47.420	42.780	40.006	1.000	28.61
ATOM	5946	CA	PHE	D	60	48.225	43.643	39.154	1.000	28.36
ATOM	5947	CB	PHE	D	60	47.342	44.259	38.061	1.000	26.03
ATOM	5948	CG	PHE	D	60	48.022	45.361	37.268	1.000	26.77
ATOM	5949	CD1	PHE	D	60	49.131	45.076	36.490	1.000	31.57
ATOM	5950	CD2	PHE	D	60	47.566	46.662	37.297	1.000	28.37
ATOM	5951	CE1	PHE	D	60	49.760	46.071	35.759	1.000	29.22
ATOM	5952	CE2	PHE	D	60	48.181	47.668	36.574	1.000	28.34
ATOM	5953	CZ	PHE	D	60	49.287	47.371	35.802	1.000	27.71
ATOM	5954	C	PHE	D	60	48.910	44.731	39.970	1.000	30.78
ATOM	5955	O	PHE	D	60	48.294	45.377	40.816	1.000	25.79
ATOM	5956	N	ALA	D	61	50.196	44.935	39.715	1.000	28.24
ATOM	5957	CA	ALA	D	61	50.955	46.014	40.331	1.000	25.80
ATOM	5958	CB	ALA	D	61	52.099	45.458	41.164	1.000	27.20
ATOM	5959	C	ALA	D	61	51.485	46.952	39.252	1.000	26.85
ATOM	5960	O	ALA	D	61	52.432	46.595	38.549	1.000	30.94
ATOM	5961	N	PRO	D	62	50.896	48.131	39.111	1.000	29.26
ATOM	5962	CD	PRO	D	62	49.790	48.672	39.919	1.000	24.84
ATOM	5963	CA	PRO	D	62	51.336	49.068	38.070	1.000	27.67
ATOM	5964	CB	PRO	D	62	50.329	50.217	38.185	1.000	28.36
ATOM	5965	CG	PRO	D	62	49.837	50.141	39.597	1.000	28.36
ATOM	5966	C	PRO	D	62	52.739	49.588	38.345	1.000	29.75
ATOM	5967	O	PRO	D	62	53.019	50.135	39.416	1.000	30.01
ATOM	5968	N	ALA	D	63	53.667	49.441	37.401	1.000	26.51
ATOM	5969	CA	ALA	D	63	55.017	49.923	37.679	1.000	27.47
ATOM	5970	CB	ALA	D	63	55.634	49.131	38.832	1.000	24.94
ATOM	5971	C	ALA	D	63	55.933	49.840	36.456	1.000	22.74
ATOM	5972	O	ALA	D	63	55.773	48.942	35.634	1.000	22.77
ATOM	5973	N	ASP	D	64	56.862	50.775	36.406	1.000	22.65

ATOM	5974	CA	ASP	D	64	57.968	50.830	35.458	1.000	26.50
ATOM	5975	CB	ASP	D	64	58.212	52.271	35.037	1.000	21.81
ATOM	5976	CG	ASP	D	64	59.270	52.434	33.969	1.000	28.32
ATOM	5977	OD1	ASP	D	64	59.229	53.472	33.272	1.000	33.50
ATOM	5978	OD2	ASP	D	64	60.140	51.549	33.820	1.000	29.49
ATOM	5979	C	ASP	D	64	59.214	50.235	36.107	1.000	25.03
ATOM	5980	O	ASP	D	64	59.679	50.774	37.112	1.000	22.61
ATOM	5981	N	VAL	D	65	59.758	49.150	35.574	1.000	27.71
ATOM	5982	CA	VAL	D	65	60.893	48.476	36.207	1.000	25.12
ATOM	5983	CB	VAL	D	65	61.241	47.133	35.540	1.000	20.68
ATOM	5984	CG1	VAL	D	65	60.113	46.122	35.682	1.000	16.74
ATOM	5985	CG2	VAL	D	65	61.566	47.314	34.065	1.000	23.11
ATOM	5986	C	VAL	D	65	62.136	49.356	36.230	1.000	23.46
ATOM	5987	O	VAL	D	65	63.080	49.064	36.976	1.000	25.73
ATOM	5988	N	THR	D	66	62.195	50.444	35.460	1.000	19.65
ATOM	5989	CA	THR	D	66	63.362	51.313	35.578	1.000	20.93
ATOM	5990	CB	THR	D	66	63.553	52.221	34.349	1.000	24.85
ATOM	5991	OG1	THR	D	66	62.389	53.045	34.196	1.000	27.53
ATOM	5992	CG2	THR	D	66	63.691	51.407	33.076	1.000	27.72
ATOM	5993	C	THR	D	66	63.272	52.221	36.803	1.000	27.29
ATOM	5994	O	THR	D	66	64.143	53.067	37.028	1.000	26.24
ATOM	5995	N	SER	D	67	62.208	52.064	37.593	1.000	27.60
ATOM	5996	CA	SER	D	67	61.987	52.986	38.698	1.000	27.65
ATOM	5997	CB	SER	D	67	60.599	53.649	38.564	1.000	24.23
ATOM	5998	OG	SER	D	67	60.362	54.377	39.765	1.000	29.46
ATOM	5999	C	SER	D	67	62.083	52.320	40.063	1.000	24.57
ATOM	6000	O	SER	D	67	61.375	51.358	40.341	1.000	25.87
ATOM	6001	N	GLU	D	68	62.947	52.826	40.930	1.000	27.01
ATOM	6002	CA	GLU	D	68	63.092	52.281	42.277	1.000	28.26
ATOM	6003	CB	GLU	D	68	64.172	53.068	43.020	1.000	29.92
ATOM	6004	CG	GLU	D	68	64.439	52.624	44.449	1.000	33.31
ATOM	6005	CD	GLU	D	68	65.710	53.252	45.002	1.000	37.25
ATOM	6006	OE1	GLU	D	68	66.756	52.568	45.036	1.000	34.88
ATOM	6007	OE2	GLU	D	68	65.671	54.437	45.393	1.000	42.89
ATOM	6008	C	GLU	D	68	61.772	52.340	43.036	1.000	26.65
ATOM	6009	O	GLU	D	68	61.299	51.352	43.598	1.000	22.12
ATOM	6010	N	LYS	D	69	61.174	53.533	43.037	1.000	21.31
ATOM	6011	CA	LYS	D	69	59.927	53.743	43.769	1.000	27.84
ATOM	6012	CB	LYS	D	69	59.507	55.207	43.685	1.000	33.93
ATOM	6013	C	LYS	D	69	58.813	52.832	43.275	1.000	29.51
ATOM	6014	O	LYS	D	69	58.129	52.184	44.075	1.000	28.88
ATOM	6015	N	ASP	D	70	58.619	52.756	41.961	1.000	24.87
ATOM	6016	CA	ASP	D	70	57.585	51.889	41.411	1.000	28.61
ATOM	6017	CB	ASP	D	70	57.550	51.965	39.883	1.000	31.79
ATOM	6018	CG	ASP	D	70	56.975	53.251	39.331	1.000	30.51
ATOM	6019	OD1	ASP	D	70	56.695	54.179	40.118	1.000	32.19
ATOM	6020	OD2	ASP	D	70	56.817	53.319	38.093	1.000	29.00
ATOM	6021	C	ASP	D	70	57.799	50.435	41.805	1.000	25.20
ATOM	6022	O	ASP	D	70	56.881	49.687	42.137	1.000	28.32
ATOM	6023	N	VAL	D	71	59.060	49.986	41.755	1.000	26.27
ATOM	6024	CA	VAL	D	71	59.277	48.575	42.094	1.000	23.48
ATOM	6025	CB	VAL	D	71	60.668	48.105	41.660	1.000	25.09
ATOM	6026	CG1	VAL	D	71	60.897	46.670	42.096	1.000	21.61
ATOM	6027	CG2	VAL	D	71	60.808	48.237	40.144	1.000	30.05
ATOM	6028	C	VAL	D	71	59.064	48.376	43.590	1.000	23.38
ATOM	6029	O	VAL	D	71	58.490	47.379	44.032	1.000	24.10
ATOM	6030	N	GLN	D	72	59.526	49.361	44.370	1.000	23.68
ATOM	6031	CA	GLN	D	72	59.295	49.251	45.817	1.000	29.60
ATOM	6032	CB	GLN	D	72	59.922	50.435	46.543	1.000	27.41
ATOM	6033	CG	GLN	D	72	61.441	50.369	46.601	1.000	30.50
ATOM	6034	CD	GLN	D	72	62.070	51.677	47.037	1.000	36.83

ATOM	6035	OE1	GLN	D	72	61.498	52.751	46.847	1.000	42.88
ATOM	6036	NE2	GLN	D	72	63.258	51.588	47.626	1.000	40.04
ATOM	6037	C	GLN	D	72	57.800	49.156	46.082	1.000	25.91
ATOM	6038	O	GLN	D	72	57.298	48.323	46.823	1.000	29.83
ATOM	6039	N	THR	D	73	57.042	50.033	45.418	1.000	26.69
ATOM	6040	CA	THR	D	73	55.589	49.988	45.579	1.000	28.25
ATOM	6041	CB	THR	D	73	54.934	51.109	44.755	1.000	35.55
ATOM	6042	OG1	THR	D	73	55.318	52.363	45.340	1.000	37.75
ATOM	6043	CG2	THR	D	73	53.419	51.024	44.814	1.000	36.99
ATOM	6044	C	THR	D	73	55.025	48.643	45.176	1.000	32.13
ATOM	6045	O	THR	D	73	54.256	48.009	45.909	1.000	38.91
ATOM	6046	N	ALA	D	74	55.384	48.152	43.988	1.000	26.62
ATOM	6047	CA	ALA	D	74	54.786	46.877	43.587	1.000	22.02
ATOM	6048	CB	ALA	D	74	55.130	46.562	42.135	1.000	26.82
ATOM	6049	C	ALA	D	74	55.216	45.759	44.519	1.000	25.59
ATOM	6050	O	ALA	D	74	54.449	44.827	44.777	1.000	33.16
ATOM	6051	N	LEU	D	75	56.434	45.794	45.066	1.000	25.61
ATOM	6052	CA	LEU	D	75	56.769	44.677	45.966	1.000	27.99
ATOM	6053	CB	LEU	D	75	58.271	44.644	46.246	1.000	28.13
ATOM	6054	CG	LEU	D	75	59.134	44.234	45.044	1.000	26.15
ATOM	6055	CD1	LEU	D	75	60.612	44.405	45.366	1.000	27.79
ATOM	6056	CD2	LEU	D	75	58.822	42.805	44.640	1.000	21.18
ATOM	6057	C	LEU	D	75	55.975	44.769	47.269	1.000	26.60
ATOM	6058	O	LEU	D	75	55.493	43.758	47.778	1.000	26.29
ATOM	6059	N	ALA	D	76	55.826	45.973	47.811	1.000	25.68
ATOM	6060	CA	ALA	D	76	55.045	46.128	49.042	1.000	33.09
ATOM	6061	CB	ALA	D	76	55.104	47.564	49.541	1.000	31.43
ATOM	6062	C	ALA	D	76	53.603	45.692	48.819	1.000	37.27
ATOM	6063	O	ALA	D	76	52.960	45.065	49.666	1.000	35.63
ATOM	6064	N	LEU	D	77	53.078	46.023	47.639	1.000	36.38
ATOM	6065	CA	LEU	D	77	51.740	45.556	47.265	1.000	29.31
ATOM	6066	CB	LEU	D	77	51.398	46.024	45.856	1.000	33.44
ATOM	6067	CG	LEU	D	77	49.932	46.072	45.431	1.000	38.05
ATOM	6068	CD1	LEU	D	77	49.777	47.044	44.263	1.000	38.40
ATOM	6069	CD2	LEU	D	77	49.396	44.700	45.059	1.000	30.81
ATOM	6070	C	LEU	D	77	51.689	44.041	47.351	1.000	31.64
ATOM	6071	O	LEU	D	77	50.752	43.432	47.855	1.000	36.47
ATOM	6072	N	ALA	D	78	52.756	43.408	46.848	1.000	31.80
ATOM	6073	CA	ALA	D	78	52.815	41.950	46.860	1.000	34.05
ATOM	6074	CB	ALA	D	78	54.036	41.462	46.087	1.000	31.79
ATOM	6075	C	ALA	D	78	52.847	41.404	48.281	1.000	29.19
ATOM	6076	O	ALA	D	78	52.165	40.436	48.622	1.000	26.82
ATOM	6077	N	LYS	D	79	53.680	42.016	49.119	1.000	30.72
ATOM	6078	CA	LYS	D	79	53.809	41.519	50.488	1.000	35.21
ATOM	6079	CB	LYS	D	79	54.853	42.314	51.247	1.000	32.89
ATOM	6080	C	LYS	D	79	52.449	41.576	51.185	1.000	38.85
ATOM	6081	O	LYS	D	79	52.023	40.609	51.809	1.000	35.65
ATOM	6082	N	GLY	D	80	51.800	42.728	51.047	1.000	39.97
ATOM	6083	CA	GLY	D	80	50.507	42.973	51.649	1.000	40.46
ATOM	6084	C	GLY	D	80	49.414	42.076	51.129	1.000	42.76
ATOM	6085	O	GLY	D	80	48.458	41.739	51.836	1.000	41.31
ATOM	6086	N	LYS	D	81	49.502	41.656	49.864	1.000	36.98
ATOM	6087	CA	LYS	D	81	48.411	40.821	49.363	1.000	34.65
ATOM	6088	CB	LYS	D	81	48.184	41.075	47.868	1.000	38.61
ATOM	6089	CG	LYS	D	81	47.306	40.047	47.182	1.000	46.80
ATOM	6090	CD	LYS	D	81	45.842	40.198	47.558	1.000	53.26
ATOM	6091	CE	LYS	D	81	45.053	38.941	47.237	1.000	57.99
ATOM	6092	NZ	LYS	D	81	43.619	39.237	46.954	1.000	62.28
ATOM	6093	C	LYS	D	81	48.675	39.350	49.631	1.000	36.61
ATOM	6094	O	LYS	D	81	47.745	38.577	49.879	1.000	35.63
ATOM	6095	N	PHE	D	82	49.939	38.922	49.579	1.000	32.32

ATOM	6096	CA	PHE	D	82	50.180	37.487	49.705	1.000	30.51
ATOM	6097	CB	PHE	D	82	50.694	36.929	48.365	1.000	34.03
ATOM	6098	CG	PHE	D	82	49.646	37.028	47.262	1.000	33.10
ATOM	6099	CD1	PHE	D	82	48.471	36.303	47.370	1.000	30.63
ATOM	6100	CD2	PHE	D	82	49.839	37.838	46.156	1.000	28.41
ATOM	6101	CE1	PHE	D	82	47.500	36.390	46.390	1.000	34.05
ATOM	6102	CE2	PHE	D	82	48.877	37.925	45.167	1.000	29.55
ATOM	6103	CZ	PHE	D	82	47.707	37.198	45.288	1.000	34.23
ATOM	6104	C	PHE	D	82	51.160	37.149	50.815	1.000	31.92
ATOM	6105	O	PHE	D	82	51.437	35.967	51.032	1.000	35.21
ATOM	6106	N	GLY	D	83	51.683	38.153	51.506	1.000	33.75
ATOM	6107	CA	GLY	D	83	52.547	37.968	52.646	1.000	37.01
ATOM	6108	C	GLY	D	83	54.012	37.721	52.376	1.000	41.28
ATOM	6109	O	GLY	D	83	54.848	37.931	53.263	1.000	37.16
ATOM	6110	N	ARG	D	84	54.365	37.263	51.176	1.000	37.51
ATOM	6111	CA	ARG	D	84	55.746	36.920	50.867	1.000	32.37
ATOM	6112	CB	ARG	D	84	56.147	35.583	51.493	1.000	27.65
ATOM	6113	CG	ARG	D	84	55.156	34.453	51.321	1.000	34.94
ATOM	6114	CD	ARG	D	84	55.813	33.082	51.292	1.000	43.12
ATOM	6115	NE	ARG	D	84	56.425	32.711	52.553	1.000	51.85
ATOM	6116	CZ	ARG	D	84	57.511	31.989	52.773	1.000	56.19
ATOM	6117	NH1	ARG	D	84	57.895	31.773	54.028	1.000	62.19
ATOM	6118	NH2	ARG	D	84	58.221	31.477	51.772	1.000	34.76
ATOM	6119	C	ARG	D	84	55.960	36.869	49.354	1.000	33.88
ATOM	6120	O	ARG	D	84	55.003	36.941	48.589	1.000	35.01
ATOM	6121	N	VAL	D	85	57.219	36.758	48.954	1.000	29.87
ATOM	6122	CA	VAL	D	85	57.626	36.532	47.576	1.000	26.11
ATOM	6123	CB	VAL	D	85	58.282	37.762	46.934	1.000	28.50
ATOM	6124	CG1	VAL	D	85	58.505	37.488	45.447	1.000	29.52
ATOM	6125	CG2	VAL	D	85	57.442	39.012	47.126	1.000	25.93
ATOM	6126	C	VAL	D	85	58.604	35.356	47.510	1.000	25.14
ATOM	6127	O	VAL	D	85	59.683	35.397	48.102	1.000	25.12
ATOM	6128	N	ASP	D	86	58.218	34.306	46.803	1.000	25.70
ATOM	6129	CA	ASP	D	86	58.998	33.093	46.654	1.000	24.79
ATOM	6130	CB	ASP	D	86	58.104	31.850	46.759	1.000	26.03
ATOM	6131	CG	ASP	D	86	57.298	31.824	48.045	1.000	31.97
ATOM	6132	OD1	ASP	D	86	56.057	31.880	47.996	1.000	31.52
ATOM	6133	OD2	ASP	D	86	57.903	31.755	49.137	1.000	34.74
ATOM	6134	C	ASP	D	86	59.723	33.039	45.309	1.000	29.22
ATOM	6135	O	ASP	D	86	60.778	32.410	45.217	1.000	24.49
ATOM	6136	N	VAL	D	87	59.153	33.674	44.288	1.000	21.53
ATOM	6137	CA	VAL	D	87	59.718	33.601	42.941	1.000	21.23
ATOM	6138	CB	VAL	D	87	58.939	32.574	42.089	1.000	26.73
ATOM	6139	CG1	VAL	D	87	59.413	32.610	40.639	1.000	25.47
ATOM	6140	CG2	VAL	D	87	59.064	31.172	42.670	1.000	24.94
ATOM	6141	C	VAL	D	87	59.664	34.939	42.222	1.000	24.90
ATOM	6142	O	VAL	D	87	58.639	35.624	42.292	1.000	27.16
ATOM	6143	N	ALA	D	88	60.734	35.313	41.521	1.000	22.93
ATOM	6144	CA	ALA	D	88	60.677	36.485	40.646	1.000	22.19
ATOM	6145	CB	ALA	D	88	61.602	37.591	41.104	1.000	17.29
ATOM	6146	C	ALA	D	88	60.993	36.071	39.203	1.000	24.09
ATOM	6147	O	ALA	D	88	61.921	35.296	38.964	1.000	23.46
ATOM	6148	N	VAL	D	89	60.197	36.577	38.274	1.000	20.82
ATOM	6149	CA	VAL	D	89	60.382	36.313	36.850	1.000	21.18
ATOM	6150	CB	VAL	D	89	59.299	35.426	36.219	1.000	27.30
ATOM	6151	CG1	VAL	D	89	59.716	35.012	34.810	1.000	18.72
ATOM	6152	CG2	VAL	D	89	58.998	34.168	37.028	1.000	15.99
ATOM	6153	C	VAL	D	89	60.414	37.654	36.116	1.000	22.82
ATOM	6154	O	VAL	D	89	59.413	38.373	36.103	1.000	24.02
ATOM	6155	N	ASN	D	90	61.565	37.980	35.539	1.000	20.51
ATOM	6156	CA	ASN	D	90	61.733	39.203	34.774	1.000	20.17

ATOM	6157	CB	ASN	D	90	63.161	39.739	34.930	1.000	19.28
ATOM	6158	CG	ASN	D	90	63.473	40.175	36.344	1.000	21.33
ATOM	6159	OD1	ASN	D	90	64.242	39.531	37.061	1.000	24.72
ATOM	6160	ND2	ASN	D	90	62.896	41.282	36.769	1.000	17.80
ATOM	6161	C	ASN	D	90	61.417	38.960	33.297	1.000	24.77
ATOM	6162	O	ASN	D	90	62.168	38.277	32.594	1.000	26.87
ATOM	6163	N	CYS	D	91	60.310	39.511	32.807	1.000	23.72
ATOM	6164	CA	CYS	D	91	59.947	39.394	31.401	1.000	23.76
ATOM	6165	CB	CYS	D	91	58.650	38.599	31.207	1.000	17.89
ATOM	6166	SG	CYS	D	91	58.869	36.834	31.517	1.000	25.59
ATOM	6167	C	CYS	D	91	59.815	40.766	30.749	1.000	26.58
ATOM	6168	O	CYS	D	91	59.791	40.871	29.515	1.000	21.51
ATOM	6169	N	ALA	D	92	59.755	41.811	31.566	1.000	21.43
ATOM	6170	CA	ALA	D	92	59.687	43.167	31.039	1.000	23.48
ATOM	6171	CB	ALA	D	92	59.741	44.198	32.158	1.000	15.96
ATOM	6172	C	ALA	D	92	60.820	43.419	30.046	1.000	29.54
ATOM	6173	O	ALA	D	92	61.996	43.186	30.345	1.000	22.45
ATOM	6174	N	GLY	D	93	60.480	43.905	28.853	1.000	26.21
ATOM	6175	CA	GLY	D	93	61.520	44.147	27.865	1.000	20.92
ATOM	6176	C	GLY	D	93	61.011	44.826	26.608	1.000	26.44
ATOM	6177	O	GLY	D	93	59.832	44.733	26.267	1.000	21.58
ATOM	6178	N	ILE	D	94	61.915	45.504	25.908	1.000	22.55
ATOM	6179	CA	ILE	D	94	61.599	46.146	24.644	1.000	22.55
ATOM	6180	CB	ILE	D	94	61.573	47.682	24.730	1.000	22.02
ATOM	6181	CG2	ILE	D	94	60.365	48.150	25.521	1.000	23.98
ATOM	6182	CG1	ILE	D	94	62.885	48.264	25.259	1.000	23.94
ATOM	6183	CD1	ILE	D	94	63.023	49.759	25.097	1.000	26.35
ATOM	6184	C	ILE	D	94	62.642	45.766	23.586	1.000	25.24
ATOM	6185	O	ILE	D	94	63.715	45.245	23.892	1.000	17.15
ATOM	6186	N	ALA	D	95	62.279	46.051	22.345	1.000	30.45
ATOM	6187	CA	ALA	D	95	63.094	45.746	21.183	1.000	29.43
ATOM	6188	CB	ALA	D	95	62.431	44.635	20.377	1.000	25.68
ATOM	6189	C	ALA	D	95	63.289	46.976	20.312	1.000	31.25
ATOM	6190	O	ALA	D	95	62.416	47.841	20.228	1.000	26.09
ATOM	6191	N	VAL	D	96	64.447	47.066	19.662	1.000	27.30
ATOM	6192	CA	VAL	D	96	64.634	48.064	18.625	1.000	25.24
ATOM	6193	CB	VAL	D	96	65.327	49.365	19.058	1.000	36.51
ATOM	6194	CG1	VAL	D	96	64.693	49.957	20.306	1.000	52.71
ATOM	6195	CG2	VAL	D	96	66.817	49.129	19.280	1.000	41.65
ATOM	6196	C	VAL	D	96	65.470	47.431	17.506	1.000	25.45
ATOM	6197	O	VAL	D	96	66.282	46.535	17.727	1.000	21.54
ATOM	6198	N	ALA	D	97	65.243	47.926	16.299	1.000	21.06
ATOM	6199	CA	ALA	D	97	66.067	47.468	15.176	1.000	21.96
ATOM	6200	CB	ALA	D	97	65.236	46.724	14.157	1.000	27.78
ATOM	6201	C	ALA	D	97	66.751	48.710	14.617	1.000	24.35
ATOM	6202	O	ALA	D	97	66.062	49.615	14.147	1.000	27.82
ATOM	6203	N	SER	D	98	68.074	48.763	14.702	1.000	21.21
ATOM	6204	CA	SER	D	98	68.799	49.939	14.223	1.000	25.16
ATOM	6205	CB	SER	D	98	68.582	51.111	15.175	1.000	22.16
ATOM	6206	OG	SER	D	98	69.228	52.299	14.765	1.000	23.19
ATOM	6207	C	SER	D	98	70.278	49.604	14.069	1.000	27.15
ATOM	6208	O	SER	D	98	70.929	49.216	15.042	1.000	21.76
ATOM	6209	N	LYS	D	99	70.792	49.761	12.854	1.000	21.91
ATOM	6210	CA	LYS	D	99	72.201	49.518	12.579	1.000	24.27
ATOM	6211	CB	LYS	D	99	72.471	49.620	11.070	1.000	24.05
ATOM	6212	CG	LYS	D	99	71.911	48.450	10.278	1.000	24.66
ATOM	6213	CD	LYS	D	99	71.701	48.833	8.820	1.000	31.29
ATOM	6214	CE	LYS	D	99	71.044	47.714	8.034	1.000	36.32
ATOM	6215	NZ	LYS	D	99	71.644	47.527	6.685	1.000	50.21
ATOM	6216	C	LYS	D	99	73.128	50.488	13.304	1.000	24.08
ATOM	6217	O	LYS	D	99	72.824	51.672	13.449	1.000	21.85

ATOM	6218	N	THR	D	100	74.282	49.979	13.746	1.000	19.95
ATOM	6219	CA	THR	D	100	75.254	50.836	14.422	1.000	19.55
ATOM	6220	CB	THR	D	100	76.545	50.079	14.781	1.000	21.22
ATOM	6221	OG1	THR	D	100	76.257	48.985	15.655	1.000	24.03
ATOM	6222	CG2	THR	D	100	77.466	51.030	15.532	1.000	22.24
ATOM	6223	C	THR	D	100	75.622	52.043	13.566	1.000	21.15
ATOM	6224	O	THR	D	100	75.636	53.187	14.026	1.000	19.49
ATOM	6225	N	TYR	D	101	75.917	51.761	12.299	1.000	20.95
ATOM	6226	CA	TYR	D	101	76.167	52.806	11.312	1.000	22.24
ATOM	6227	CB	TYR	D	101	77.625	53.287	11.272	1.000	23.19
ATOM	6228	CG	TYR	D	101	77.835	54.290	10.152	1.000	24.99
ATOM	6229	CD1	TYR	D	101	78.536	53.962	9.004	1.000	30.17
ATOM	6230	CE1	TYR	D	101	78.715	54.887	7.989	1.000	33.21
ATOM	6231	CD2	TYR	D	101	77.308	55.568	10.251	1.000	29.66
ATOM	6232	CE2	TYR	D	101	77.474	56.503	9.247	1.000	29.30
ATOM	6233	CZ	TYR	D	101	78.180	56.150	8.118	1.000	34.03
ATOM	6234	OH	TYR	D	101	78.352	57.072	7.109	1.000	33.32
ATOM	6235	C	TYR	D	101	75.754	52.275	9.940	1.000	29.72
ATOM	6236	O	TYR	D	101	76.075	51.134	9.609	1.000	26.97
ATOM	6237	N	ASN	D	102	75.036	53.098	9.185	1.000	29.84
ATOM	6238	CA	ASN	D	102	74.534	52.672	7.879	1.000	27.82
ATOM	6239	CB	ASN	D	102	73.013	52.716	7.886	1.000	29.39
ATOM	6240	CG	ASN	D	102	72.379	52.247	6.594	1.000	37.37
ATOM	6241	OD1	ASN	D	102	73.063	52.102	5.579	1.000	39.57
ATOM	6242	ND2	ASN	D	102	71.070	52.010	6.634	1.000	26.10
ATOM	6243	C	ASN	D	102	75.118	53.566	6.792	1.000	27.53
ATOM	6244	O	ASN	D	102	74.664	54.693	6.601	1.000	28.16
ATOM	6245	N	LEU	D	103	76.145	53.089	6.092	1.000	30.38
ATOM	6246	CA	LEU	D	103	76.778	53.927	5.077	1.000	32.06
ATOM	6247	CB	LEU	D	103	78.029	53.267	4.499	1.000	31.44
ATOM	6248	CG	LEU	D	103	78.845	54.165	3.556	1.000	31.02
ATOM	6249	CD1	LEU	D	103	79.382	55.382	4.291	1.000	34.86
ATOM	6250	CD2	LEU	D	103	79.975	53.376	2.910	1.000	31.19
ATOM	6251	C	LEU	D	103	75.799	54.252	3.951	1.000	38.73
ATOM	6252	O	LEU	D	103	75.758	55.382	3.458	1.000	41.00
ATOM	6253	N	LYS	D	104	75.006	53.256	3.568	1.000	42.41
ATOM	6254	CA	LYS	D	104	74.059	53.402	2.469	1.000	42.43
ATOM	6255	CB	LYS	D	104	73.257	52.117	2.304	1.000	49.29
ATOM	6256	C	LYS	D	104	73.135	54.594	2.672	1.000	38.48
ATOM	6257	O	LYS	D	104	72.873	55.374	1.758	1.000	46.32
ATOM	6258	N	LYS	D	105	72.629	54.738	3.882	1.000	34.33
ATOM	6259	CA	LYS	D	105	71.759	55.831	4.272	1.000	34.50
ATOM	6260	CB	LYS	D	105	70.730	55.320	5.280	1.000	43.73
ATOM	6261	CG	LYS	D	105	69.341	55.017	4.762	1.000	51.53
ATOM	6262	CD	LYS	D	105	68.334	55.177	5.902	1.000	60.99
ATOM	6263	CE	LYS	D	105	68.852	56.167	6.937	1.000	66.55
ATOM	6264	NZ	LYS	D	105	68.589	55.715	8.329	1.000	70.72
ATOM	6265	C	LYS	D	105	72.544	56.954	4.927	1.000	31.68
ATOM	6266	O	LYS	D	105	71.971	57.994	5.265	1.000	34.61
ATOM	6267	N	GLY	D	106	73.844	56.744	5.149	1.000	26.87
ATOM	6268	CA	GLY	D	106	74.599	57.744	5.902	1.000	24.09
ATOM	6269	C	GLY	D	106	73.997	57.951	7.281	1.000	29.52
ATOM	6270	O	GLY	D	106	73.940	59.070	7.794	1.000	36.21
ATOM	6271	N	GLN	D	107	73.531	56.873	7.908	1.000	31.56
ATOM	6272	CA	GLN	D	107	72.821	56.986	9.176	1.000	31.60
ATOM	6273	CB	GLN	D	107	71.414	56.420	9.023	1.000	31.54
ATOM	6274	C	GLN	D	107	73.535	56.282	10.326	1.000	27.83
ATOM	6275	O	GLN	D	107	74.124	55.221	10.139	1.000	21.99
ATOM	6276	N	THR	D	108	73.450	56.914	11.488	1.000	28.97
ATOM	6277	CA	THR	D	108	74.099	56.498	12.718	1.000	27.95
ATOM	6278	CB	THR	D	108	75.039	57.610	13.230	1.000	27.01

ATOM	6279	OG1	THR	D	108	76.069	57.806	12.244	1.000	26.81
ATOM	6280	CG2	THR	D	108	75.712	57.203	14.535	1.000	23.92
ATOM	6281	C	THR	D	108	73.093	56.158	13.813	1.000	25.94
ATOM	6282	O	THR	D	108	72.169	56.930	14.057	1.000	24.57
ATOM	6283	N	HIS	D	109	73.288	55.017	14.460	1.000	24.99
ATOM	6284	CA	HIS	D	109	72.481	54.609	15.610	1.000	22.08
ATOM	6285	CB	HIS	D	109	73.066	53.330	16.199	1.000	24.31
ATOM	6286	CG	HIS	D	109	72.217	52.581	17.173	1.000	21.11
ATOM	6287	CD2	HIS	D	109	71.849	51.281	17.199	1.000	22.29
ATOM	6288	ND1	HIS	D	109	71.647	53.161	18.289	1.000	21.14
ATOM	6289	CE1	HIS	D	109	70.961	52.248	18.953	1.000	22.36
ATOM	6290	NE2	HIS	D	109	71.064	51.090	18.313	1.000	24.23
ATOM	6291	C	HIS	D	109	72.442	55.727	16.634	1.000	21.13
ATOM	6292	O	HIS	D	109	73.475	56.295	16.997	1.000	24.86
ATOM	6293	N	THR	D	110	71.265	56.105	17.134	1.000	22.33
ATOM	6294	CA	THR	D	110	71.270	57.195	18.113	1.000	21.15
ATOM	6295	CB	THR	D	110	69.891	57.855	18.291	1.000	24.47
ATOM	6296	OG1	THR	D	110	69.064	56.917	19.003	1.000	24.44
ATOM	6297	CG2	THR	D	110	69.245	58.154	16.947	1.000	22.97
ATOM	6298	C	THR	D	110	71.697	56.698	19.488	1.000	22.11
ATOM	6299	O	THR	D	110	71.439	55.555	19.857	1.000	28.62
ATOM	6300	N	LEU	D	111	72.331	57.585	20.245	1.000	25.58
ATOM	6301	CA	LEU	D	111	72.736	57.213	21.601	1.000	24.13
ATOM	6302	CB	LEU	D	111	73.554	58.351	22.214	1.000	22.07
ATOM	6303	CG	LEU	D	111	74.351	58.004	23.473	1.000	27.10
ATOM	6304	CD1	LEU	D	111	75.280	56.822	23.222	1.000	23.25
ATOM	6305	CD2	LEU	D	111	75.156	59.199	23.966	1.000	26.98
ATOM	6306	C	LEU	D	111	71.519	56.871	22.448	1.000	25.93
ATOM	6307	O	LEU	D	111	71.495	55.918	23.234	1.000	25.17
ATOM	6308	N	GLU	D	112	70.447	57.654	22.311	1.000	24.62
ATOM	6309	CA	GLU	D	112	69.296	57.407	23.179	1.000	31.12
ATOM	6310	CB	GLU	D	112	68.320	58.590	23.145	1.000	42.68
ATOM	6311	CG	GLU	D	112	68.495	59.531	24.328	1.000	59.94
ATOM	6312	CD	GLU	D	112	69.326	58.988	25.477	1.000	63.78
ATOM	6313	OE1	GLU	D	112	68.742	58.501	26.473	1.000	57.36
ATOM	6314	OE2	GLU	D	112	70.577	59.055	25.393	1.000	40.17
ATOM	6315	C	GLU	D	112	68.584	56.108	22.842	1.000	29.53
ATOM	6316	O	GLU	D	112	68.017	55.506	23.759	1.000	27.04
ATOM	6317	N	ASP	D	113	68.608	55.665	21.591	1.000	26.11
ATOM	6318	CA	ASP	D	113	68.051	54.351	21.270	1.000	25.53
ATOM	6319	CB	ASP	D	113	68.096	54.113	19.759	1.000	25.99
ATOM	6320	CG	ASP	D	113	66.784	54.448	19.072	1.000	30.30
ATOM	6321	OD1	ASP	D	113	65.844	54.914	19.753	1.000	32.37
ATOM	6322	OD2	ASP	D	113	66.656	54.246	17.848	1.000	28.37
ATOM	6323	C	ASP	D	113	68.805	53.247	22.013	1.000	24.25
ATOM	6324	O	ASP	D	113	68.240	52.244	22.448	1.000	24.18
ATOM	6325	N	PHE	D	114	70.115	53.436	22.152	1.000	19.95
ATOM	6326	CA	PHE	D	114	70.939	52.464	22.872	1.000	22.83
ATOM	6327	CB	PHE	D	114	72.420	52.714	22.607	1.000	20.00
ATOM	6328	CG	PHE	D	114	73.343	51.605	23.067	1.000	22.08
ATOM	6329	CD1	PHE	D	114	73.985	51.682	24.292	1.000	22.82
ATOM	6330	CD2	PHE	D	114	73.561	50.494	22.270	1.000	21.94
ATOM	6331	CE1	PHE	D	114	74.820	50.666	24.715	1.000	20.62
ATOM	6332	CE2	PHE	D	114	74.398	49.476	22.680	1.000	21.46
ATOM	6333	CZ	PHE	D	114	75.039	49.576	23.899	1.000	18.59
ATOM	6334	C	PHE	D	114	70.643	52.534	24.372	1.000	21.87
ATOM	6335	O	PHE	D	114	70.464	51.496	25.009	1.000	21.31
ATOM	6336	N	GLN	D	115	70.583	53.743	24.913	1.000	24.02
ATOM	6337	CA	GLN	D	115	70.370	53.959	26.344	1.000	24.66
ATOM	6338	CB	GLN	D	115	70.477	55.444	26.700	1.000	25.07
ATOM	6339	CG	GLN	D	115	70.334	55.724	28.197	1.000	29.62

ATOM	6340	CD	GLN	D	115	71.606	55.421	28.961	1.000	32.26
ATOM	6341	OE1	GLN	D	115	72.679	55.907	28.602	1.000	32.00
ATOM	6342	NE2	GLN	D	115	71.525	54.622	30.019	1.000	29.01
ATOM	6343	C	GLN	D	115	69.016	53.433	26.802	1.000	22.64
ATOM	6344	O	GLN	D	115	68.895	52.844	27.871	1.000	26.88
ATOM	6345	N	ARG	D	116	67.982	53.648	25.998	1.000	21.99
ATOM	6346	CA	ARG	D	116	66.637	53.224	26.372	1.000	23.55
ATOM	6347	CB	ARG	D	116	65.640	53.763	25.350	1.000	27.00
ATOM	6348	C	ARG	D	116	66.532	51.711	26.504	1.000	23.39
ATOM	6349	O	ARG	D	116	65.906	51.149	27.406	1.000	21.70
ATOM	6350	N	VAL	D	117	67.144	50.989	25.573	1.000	21.56
ATOM	6351	CA	VAL	D	117	67.073	49.533	25.582	1.000	23.53
ATOM	6352	CB	VAL	D	117	67.609	48.990	24.239	1.000	22.11
ATOM	6353	CG1	VAL	D	117	67.774	47.484	24.260	1.000	16.76
ATOM	6354	CG2	VAL	D	117	66.664	49.411	23.115	1.000	26.84
ATOM	6355	C	VAL	D	117	67.846	48.937	26.753	1.000	20.88
ATOM	6356	O	VAL	D	117	67.446	47.933	27.343	1.000	22.24
ATOM	6357	N	LEU	D	118	68.975	49.539	27.087	1.000	18.85
ATOM	6358	CA	LEU	D	118	69.789	49.147	28.221	1.000	23.19
ATOM	6359	CB	LEU	D	118	71.041	50.009	28.348	1.000	23.72
ATOM	6360	CG	LEU	D	118	72.317	49.661	27.600	1.000	37.64
ATOM	6361	CD1	LEU	D	118	73.527	50.143	28.402	1.000	34.18
ATOM	6362	CD2	LEU	D	118	72.426	48.174	27.297	1.000	39.23
ATOM	6363	C	LEU	D	118	69.018	49.334	29.531	1.000	24.46
ATOM	6364	O	LEU	D	118	68.965	48.499	30.430	1.000	26.50
ATOM	6365	N	ASP	D	119	68.433	50.529	29.604	1.000	23.45
ATOM	6366	CA	ASP	D	119	67.734	50.943	30.813	1.000	20.49
ATOM	6367	CB	ASP	D	119	67.298	52.402	30.675	1.000	21.70
ATOM	6368	CG	ASP	D	119	68.469	53.349	30.876	1.000	24.66
ATOM	6369	OD1	ASP	D	119	68.249	54.577	30.868	1.000	37.01
ATOM	6370	OD2	ASP	D	119	69.614	52.870	31.041	1.000	27.68
ATOM	6371	C	ASP	D	119	66.559	50.025	31.098	1.000	26.03
ATOM	6372	O	ASP	D	119	66.410	49.543	32.222	1.000	22.46
ATOM	6373	N	VAL	D	120	65.718	49.766	30.094	1.000	26.23
ATOM	6374	CA	VAL	D	120	64.566	48.908	30.351	1.000	22.36
ATOM	6375	CB	VAL	D	120	63.511	48.983	29.231	1.000	22.81
ATOM	6376	CG1	VAL	D	120	62.412	47.954	29.466	1.000	19.93
ATOM	6377	CG2	VAL	D	120	62.907	50.375	29.137	1.000	28.30
ATOM	6378	C	VAL	D	120	64.978	47.450	30.514	1.000	22.74
ATOM	6379	O	VAL	D	120	64.605	46.804	31.495	1.000	24.55
ATOM	6380	N	ASN	D	121	65.734	46.919	29.547	1.000	18.38
ATOM	6381	CA	ASN	D	121	66.020	45.497	29.514	1.000	15.30
ATOM	6382	CB	ASN	D	121	66.583	45.094	28.143	1.000	20.69
ATOM	6383	CG	ASN	D	121	65.530	45.119	27.056	1.000	26.58
ATOM	6384	OD1	ASN	D	121	64.352	45.388	27.314	1.000	27.53
ATOM	6385	ND2	ASN	D	121	65.934	44.844	25.825	1.000	21.69
ATOM	6386	C	ASN	D	121	67.013	45.050	30.583	1.000	18.37
ATOM	6387	O	ASN	D	121	66.808	43.983	31.166	1.000	20.46
ATOM	6388	N	LEU	D	122	68.053	45.842	30.793	1.000	20.17
ATOM	6389	CA	LEU	D	122	69.172	45.423	31.640	1.000	18.87
ATOM	6390	CB	LEU	D	122	70.488	45.759	30.940	1.000	20.22
ATOM	6391	CG	LEU	D	122	71.785	45.431	31.679	1.000	22.50
ATOM	6392	CD1	LEU	D	122	71.791	43.969	32.116	1.000	19.47
ATOM	6393	CD2	LEU	D	122	73.002	45.739	30.815	1.000	13.29
ATOM	6394	C	LEU	D	122	69.097	46.064	33.024	1.000	22.74
ATOM	6395	O	LEU	D	122	69.042	45.339	34.022	1.000	23.12
ATOM	6396	N	MET	D	123	69.094	47.391	33.110	1.000	19.62
ATOM	6397	CA	MET	D	123	69.023	48.058	34.414	1.000	21.53
ATOM	6398	CB	MET	D	123	69.176	49.565	34.258	1.000	24.22
ATOM	6399	CG	MET	D	123	69.034	50.403	35.516	1.000	25.27
ATOM	6400	SD	MET	D	123	67.343	50.956	35.801	1.000	26.68

ATOM	6401	CE	MET	D	123	67.209	52.315	34.650	1.000	23.05
ATOM	6402	C	MET	D	123	67.712	47.704	35.106	1.000	26.27
ATOM	6403	O	MET	D	123	67.674	47.364	36.288	1.000	22.41
ATOM	6404	N	GLY	D	124	66.604	47.765	34.368	1.000	23.16
ATOM	6405	CA	GLY	D	124	65.306	47.408	34.921	1.000	23.30
ATOM	6406	C	GLY	D	124	65.311	46.009	35.507	1.000	28.26
ATOM	6407	O	GLY	D	124	64.760	45.783	36.589	1.000	25.60
ATOM	6408	N	THR	D	125	65.922	45.053	34.808	1.000	21.28
ATOM	6409	CA	THR	D	125	65.981	43.687	35.340	1.000	18.79
ATOM	6410	CB	THR	D	125	66.528	42.692	34.307	1.000	19.73
ATOM	6411	OG1	THR	D	125	65.460	42.277	33.438	1.000	20.94
ATOM	6412	CG2	THR	D	125	67.039	41.421	34.966	1.000	19.51
ATOM	6413	C	THR	D	125	66.813	43.663	36.617	1.000	20.50
ATOM	6414	O	THR	D	125	66.383	43.054	37.602	1.000	22.54
ATOM	6415	N	PHE	D	126	67.969	44.318	36.623	1.000	22.38
ATOM	6416	CA	PHE	D	126	68.769	44.394	37.843	1.000	23.35
ATOM	6417	CB	PHE	D	126	70.122	45.087	37.643	1.000	18.53
ATOM	6418	CG	PHE	D	126	70.989	45.079	38.896	1.000	25.35
ATOM	6419	CD1	PHE	D	126	71.667	43.943	39.293	1.000	24.48
ATOM	6420	CD2	PHE	D	126	71.132	46.214	39.680	1.000	29.37
ATOM	6421	CE1	PHE	D	126	72.463	43.925	40.430	1.000	21.17
ATOM	6422	CE2	PHE	D	126	71.925	46.210	40.819	1.000	27.18
ATOM	6423	CZ	PHE	D	126	72.606	45.063	41.200	1.000	20.25
ATOM	6424	C	PHE	D	126	68.004	45.117	38.951	1.000	22.47
ATOM	6425	O	PHE	D	126	68.123	44.694	40.101	1.000	19.76
ATOM	6426	N	ASN	D	127	67.248	46.155	38.616	1.000	19.34
ATOM	6427	CA	ASN	D	127	66.464	46.884	39.614	1.000	23.88
ATOM	6428	CB	ASN	D	127	65.681	48.036	38.975	1.000	22.44
ATOM	6429	CG	ASN	D	127	65.039	48.962	39.988	1.000	30.06
ATOM	6430	OD1	ASN	D	127	65.566	49.201	41.082	1.000	29.26
ATOM	6431	ND2	ASN	D	127	63.878	49.514	39.644	1.000	22.96
ATOM	6432	C	ASN	D	127	65.518	45.947	40.358	1.000	25.51
ATOM	6433	O	ASN	D	127	65.516	45.912	41.594	1.000	29.94
ATOM	6434	N	VAL	D	128	64.727	45.177	39.621	1.000	22.04
ATOM	6435	CA	VAL	D	128	63.826	44.206	40.243	1.000	24.33
ATOM	6436	CB	VAL	D	128	62.956	43.507	39.181	1.000	23.82
ATOM	6437	CG1	VAL	D	128	62.112	42.395	39.772	1.000	19.10
ATOM	6438	CG2	VAL	D	128	62.057	44.530	38.493	1.000	24.29
ATOM	6439	C	VAL	D	128	64.591	43.173	41.058	1.000	25.09
ATOM	6440	O	VAL	D	128	64.237	42.900	42.210	1.000	24.73
ATOM	6441	N	ILE	D	129	65.646	42.588	40.500	1.000	19.60
ATOM	6442	CA	ILE	D	129	66.413	41.570	41.212	1.000	20.00
ATOM	6443	CB	ILE	D	129	67.623	41.085	40.386	1.000	19.71
ATOM	6444	CG2	ILE	D	129	68.625	40.382	41.290	1.000	20.01
ATOM	6445	CG1	ILE	D	129	67.294	40.185	39.197	1.000	20.97
ATOM	6446	CD1	ILE	D	129	68.461	40.025	38.231	1.000	20.09
ATOM	6447	C	ILE	D	129	66.944	42.064	42.555	1.000	22.83
ATOM	6448	O	ILE	D	129	66.847	41.373	43.577	1.000	23.59
ATOM	6449	N	ARG	D	130	67.537	43.259	42.570	1.000	21.25
ATOM	6450	CA	ARG	D	130	68.158	43.727	43.813	1.000	23.54
ATOM	6451	CB	ARG	D	130	68.999	44.977	43.560	1.000	22.14
ATOM	6452	CG	ARG	D	130	68.195	46.253	43.482	1.000	20.61
ATOM	6453	CD	ARG	D	130	68.975	47.455	42.942	1.000	19.85
ATOM	6454	NE	ARG	D	130	67.980	48.538	42.867	1.000	25.36
ATOM	6455	CZ	ARG	D	130	67.805	49.473	43.786	1.000	25.50
ATOM	6456	NH1	ARG	D	130	66.868	50.401	43.628	1.000	20.78
ATOM	6457	NH2	ARG	D	130	68.580	49.482	44.857	1.000	19.51
ATOM	6458	C	ARG	D	130	67.096	43.971	44.877	1.000	27.48
ATOM	6459	O	ARG	D	130	67.303	43.695	46.061	1.000	23.84
ATOM	6460	N	LEU	D	131	65.932	44.474	44.473	1.000	27.06
ATOM	6461	CA	LEU	D	131	64.884	44.753	45.458	1.000	28.21

ATOM	6462	CB	LEU	D	131	63.895	45.787	44.910	1.000	23.68
ATOM	6463	CG	LEU	D	131	64.445	47.216	44.808	1.000	26.52
ATOM	6464	CD1	LEU	D	131	63.477	48.145	44.089	1.000	23.04
ATOM	6465	CD2	LEU	D	131	64.770	47.782	46.188	1.000	32.33
ATOM	6466	C	LEU	D	131	64.189	43.471	45.891	1.000	29.02
ATOM	6467	O	LEU	D	131	63.973	43.244	47.089	1.000	26.84
ATOM	6468	N	VAL	D	132	63.846	42.601	44.947	1.000	18.42
ATOM	6469	CA	VAL	D	132	63.159	41.367	45.325	1.000	18.90
ATOM	6470	CB	VAL	D	132	62.618	40.598	44.106	1.000	23.35
ATOM	6471	CG1	VAL	D	132	63.708	39.751	43.463	1.000	23.66
ATOM	6472	CG2	VAL	D	132	61.446	39.715	44.506	1.000	22.79
ATOM	6473	C	VAL	D	132	64.073	40.451	46.132	1.000	23.76
ATOM	6474	O	VAL	D	132	63.616	39.657	46.953	1.000	27.48
ATOM	6475	N	ALA	D	133	65.389	40.531	45.932	1.000	22.04
ATOM	6476	CA	ALA	D	133	66.297	39.729	46.754	1.000	23.76
ATOM	6477	CB	ALA	D	133	67.730	39.926	46.302	1.000	20.82
ATOM	6478	C	ALA	D	133	66.148	40.103	48.230	1.000	24.85
ATOM	6479	O	ALA	D	133	66.290	39.282	49.131	1.000	23.50
ATOM	6480	N	GLY	D	134	65.852	41.376	48.460	1.000	26.12
ATOM	6481	CA	GLY	D	134	65.563	41.870	49.793	1.000	32.35
ATOM	6482	C	GLY	D	134	64.285	41.284	50.357	1.000	34.57
ATOM	6483	O	GLY	D	134	64.202	41.047	51.568	1.000	35.22
ATOM	6484	N	GLU	D	135	63.277	41.038	49.523	1.000	30.01
ATOM	6485	CA	GLU	D	135	62.034	40.496	50.068	1.000	28.91
ATOM	6486	CB	GLU	D	135	60.839	40.738	49.147	1.000	26.20
ATOM	6487	CG	GLU	D	135	60.598	42.200	48.824	1.000	30.37
ATOM	6488	CD	GLU	D	135	60.124	42.990	50.027	1.000	35.33
ATOM	6489	OE1	GLU	D	135	60.588	44.135	50.204	1.000	44.37
ATOM	6490	OE2	GLU	D	135	59.294	42.447	50.785	1.000	45.78
ATOM	6491	C	GLU	D	135	62.163	39.001	50.343	1.000	30.94
ATOM	6492	O	GLU	D	135	61.616	38.487	51.323	1.000	32.39
ATOM	6493	N	MET	D	136	62.873	38.287	49.475	1.000	23.95
ATOM	6494	CA	MET	D	136	63.071	36.860	49.680	1.000	23.00
ATOM	6495	CB	MET	D	136	63.685	36.218	48.428	1.000	27.92
ATOM	6496	CG	MET	D	136	62.749	36.166	47.227	1.000	30.16
ATOM	6497	SD	MET	D	136	63.670	35.935	45.689	1.000	23.75
ATOM	6498	CE	MET	D	136	62.344	35.879	44.489	1.000	20.24
ATOM	6499	C	MET	D	136	63.986	36.591	50.868	1.000	21.34
ATOM	6500	O	MET	D	136	63.924	35.549	51.518	1.000	26.69
ATOM	6501	N	GLY	D	137	64.877	37.539	51.158	1.000	23.58
ATOM	6502	CA	GLY	D	137	65.799	37.353	52.276	1.000	27.87
ATOM	6503	C	GLY	D	137	65.026	37.196	53.578	1.000	34.97
ATOM	6504	O	GLY	D	137	65.484	36.540	54.512	1.000	32.81
ATOM	6505	N	GLN	D	138	63.837	37.798	53.610	1.000	29.09
ATOM	6506	CA	GLN	D	138	62.998	37.802	54.802	1.000	30.46
ATOM	6507	CB	GLN	D	138	61.956	38.908	54.691	1.000	33.07
ATOM	6508	C	GLN	D	138	62.327	36.459	55.039	1.000	34.33
ATOM	6509	O	GLN	D	138	61.800	36.204	56.124	1.000	36.30
ATOM	6510	N	ASN	D	139	62.341	35.587	54.028	1.000	31.51
ATOM	6511	CA	ASN	D	139	61.696	34.291	54.219	1.000	28.20
ATOM	6512	CB	ASN	D	139	61.363	33.612	52.900	1.000	27.26
ATOM	6513	CG	ASN	D	139	60.572	34.464	51.932	1.000	34.45
ATOM	6514	OD1	ASN	D	139	59.779	35.315	52.340	1.000	32.80
ATOM	6515	ND2	ASN	D	139	60.798	34.227	50.642	1.000	25.07
ATOM	6516	C	ASN	D	139	62.606	33.367	55.024	1.000	32.92
ATOM	6517	O	ASN	D	139	63.820	33.396	54.827	1.000	30.48
ATOM	6518	N	GLU	D	140	62.025	32.552	55.903	1.000	30.73
ATOM	6519	CA	GLU	D	140	62.828	31.514	56.550	1.000	32.23
ATOM	6520	CB	GLU	D	140	62.098	30.903	57.730	1.000	38.83
ATOM	6521	C	GLU	D	140	63.174	30.453	55.510	1.000	32.14
ATOM	6522	O	GLU	D	140	62.303	30.103	54.706	1.000	31.41

ATOM	6523	N	PRO	D	141	64.397	29.942	55.494	1.000	30.57
ATOM	6524	CD	PRO	D	141	65.498	30.258	56.412	1.000	30.81
ATOM	6525	CA	PRO	D	141	64.771	28.949	54.483	1.000	28.26
ATOM	6526	CB	PRO	D	141	66.204	28.575	54.847	1.000	32.66
ATOM	6527	CG	PRO	D	141	66.701	29.650	55.748	1.000	32.60
ATOM	6528	C	PRO	D	141	63.877	27.717	54.550	1.000	35.61
ATOM	6529	O	PRO	D	141	63.444	27.315	55.630	1.000	38.04
ATOM	6530	N	ASP	D	142	63.595	27.116	53.391	1.000	31.00
ATOM	6531	CA	ASP	D	142	62.833	25.868	53.394	1.000	30.24
ATOM	6532	CB	ASP	D	142	62.203	25.612	52.035	1.000	35.96
ATOM	6533	CG	ASP	D	142	63.154	25.321	50.898	1.000	34.68
ATOM	6534	OD1	ASP	D	142	64.363	25.098	51.104	1.000	27.65
ATOM	6535	OD2	ASP	D	142	62.670	25.303	49.742	1.000	33.75
ATOM	6536	C	ASP	D	142	63.741	24.710	53.799	1.000	34.08
ATOM	6537	O	ASP	D	142	64.880	24.929	54.213	1.000	29.73
ATOM	6538	N	GLN	D	143	63.245	23.487	53.653	1.000	34.49
ATOM	6539	CA	GLN	D	143	64.011	22.307	54.043	1.000	39.62
ATOM	6540	CB	GLN	D	143	63.204	21.045	53.757	1.000	38.01
ATOM	6541	C	GLN	D	143	65.369	22.242	53.346	1.000	41.65
ATOM	6542	O	GLN	D	143	66.328	21.695	53.900	1.000	35.45
ATOM	6543	N	GLY	D	144	65.443	22.791	52.136	1.000	37.16
ATOM	6544	CA	GLY	D	144	66.661	22.736	51.337	1.000	30.96
ATOM	6545	C	GLY	D	144	67.455	24.022	51.448	1.000	31.88
ATOM	6546	O	GLY	D	144	68.358	24.282	50.651	1.000	29.80
ATOM	6547	N	GLY	D	145	67.119	24.841	52.445	1.000	28.25
ATOM	6548	CA	GLY	D	145	67.786	26.101	52.691	1.000	24.94
ATOM	6549	C	GLY	D	145	67.436	27.188	51.692	1.000	25.03
ATOM	6550	O	GLY	D	145	68.057	28.252	51.660	1.000	22.98
ATOM	6551	N	GLN	D	146	66.438	26.952	50.854	1.000	23.54
ATOM	6552	CA	GLN	D	146	66.079	27.907	49.818	1.000	25.58
ATOM	6553	CB	GLN	D	146	65.402	27.173	48.646	1.000	26.63
ATOM	6554	CG	GLN	D	146	65.240	28.068	47.420	1.000	31.76
ATOM	6555	CD	GLN	D	146	64.934	27.273	46.163	1.000	30.74
ATOM	6556	OE1	GLN	D	146	65.837	26.723	45.538	1.000	26.69
ATOM	6557	NE2	GLN	D	146	63.659	27.205	45.802	1.000	26.20
ATOM	6558	C	GLN	D	146	65.155	29.015	50.305	1.000	27.84
ATOM	6559	O	GLN	D	146	64.176	28.757	51.009	1.000	29.88
ATOM	6560	N	ARG	D	147	65.476	30.248	49.918	1.000	21.77
ATOM	6561	CA	ARG	D	147	64.660	31.403	50.244	1.000	20.05
ATOM	6562	CB	ARG	D	147	65.524	32.520	50.844	1.000	19.56
ATOM	6563	CG	ARG	D	147	65.830	32.272	52.325	1.000	20.31
ATOM	6564	CD	ARG	D	147	66.349	33.569	52.933	1.000	25.52
ATOM	6565	NE	ARG	D	147	66.652	33.413	54.348	1.000	27.20
ATOM	6566	CZ	ARG	D	147	67.852	33.105	54.824	1.000	33.45
ATOM	6567	NH1	ARG	D	147	68.015	32.991	56.135	1.000	36.21
ATOM	6568	NH2	ARG	D	147	68.871	32.911	53.997	1.000	25.45
ATOM	6569	C	ARG	D	147	63.920	31.950	49.032	1.000	27.39
ATOM	6570	O	ARG	D	147	62.966	32.713	49.198	1.000	27.36
ATOM	6571	N	GLY	D	148	64.343	31.588	47.822	1.000	26.76
ATOM	6572	CA	GLY	D	148	63.609	32.056	46.647	1.000	24.31
ATOM	6573	C	GLY	D	148	64.307	31.704	45.344	1.000	26.16
ATOM	6574	O	GLY	D	148	65.459	31.252	45.369	1.000	23.81
ATOM	6575	N	VAL	D	149	63.606	31.924	44.235	1.000	22.84
ATOM	6576	CA	VAL	D	149	64.141	31.695	42.891	1.000	22.49
ATOM	6577	CB	VAL	D	149	63.528	30.432	42.267	1.000	23.53
ATOM	6578	CG1	VAL	D	149	64.113	30.124	40.899	1.000	24.88
ATOM	6579	CG2	VAL	D	149	63.759	29.246	43.201	1.000	29.26
ATOM	6580	C	VAL	D	149	63.912	32.905	41.991	1.000	24.44
ATOM	6581	O	VAL	D	149	62.822	33.468	41.902	1.000	19.35
ATOM	6582	N	ILE	D	150	64.972	33.336	41.313	1.000	23.79
ATOM	6583	CA	ILE	D	150	64.904	34.472	40.398	1.000	20.68

ATOM	6584	CB	ILE	D	150	65.857	35.590	40.835	1.000	23.33
ATOM	6585	CG2	ILE	D	150	65.950	36.705	39.800	1.000	23.62
ATOM	6586	CG1	ILE	D	150	65.499	36.157	42.217	1.000	22.16
ATOM	6587	CD1	ILE	D	150	66.361	37.303	42.679	1.000	22.90
ATOM	6588	C	ILE	D	150	65.221	34.002	38.978	1.000	23.90
ATOM	6589	O	ILE	D	150	66.265	33.381	38.752	1.000	24.70
ATOM	6590	N	ILE	D	151	64.323	34.284	38.042	1.000	19.69
ATOM	6591	CA	ILE	D	151	64.461	33.829	36.660	1.000	18.08
ATOM	6592	CB	ILE	D	151	63.373	32.811	36.275	1.000	20.01
ATOM	6593	CG2	ILE	D	151	63.556	32.325	34.840	1.000	16.55
ATOM	6594	CG1	ILE	D	151	63.272	31.620	37.227	1.000	21.12
ATOM	6595	CD1	ILE	D	151	62.210	30.603	36.855	1.000	22.94
ATOM	6596	C	ILE	D	151	64.402	35.029	35.721	1.000	23.47
ATOM	6597	O	ILE	D	151	63.402	35.757	35.733	1.000	23.16
ATOM	6598	N	ASN	D	152	65.469	35.201	34.939	1.000	22.25
ATOM	6599	CA	ASN	D	152	65.566	36.340	34.031	1.000	17.00
ATOM	6600	CB	ASN	D	152	66.939	36.993	34.163	1.000	18.22
ATOM	6601	CG	ASN	D	152	67.347	37.129	35.623	1.000	22.84
ATOM	6602	OD1	ASN	D	152	68.340	36.563	36.091	1.000	31.50
ATOM	6603	ND2	ASN	D	152	66.542	37.898	36.341	1.000	16.63
ATOM	6604	C	ASN	D	152	65.316	35.937	32.581	1.000	20.23
ATOM	6605	O	ASN	D	152	65.391	34.767	32.229	1.000	21.50
ATOM	6606	N	THR	D	153	65.014	36.907	31.733	1.000	23.06
ATOM	6607	CA	THR	D	153	64.800	36.646	30.313	1.000	20.08
ATOM	6608	CB	THR	D	153	63.407	37.093	29.843	1.000	22.69
ATOM	6609	OG1	THR	D	153	62.392	36.524	30.690	1.000	19.08
ATOM	6610	CG2	THR	D	153	63.126	36.586	28.434	1.000	22.90
ATOM	6611	C	THR	D	153	65.868	37.376	29.503	1.000	19.71
ATOM	6612	O	THR	D	153	65.902	38.606	29.459	1.000	18.87
ATOM	6613	N	ALA	D	154	66.757	36.605	28.882	1.000	19.04
ATOM	6614	CA	ALA	D	154	67.764	37.172	27.989	1.000	20.22
ATOM	6615	CB	ALA	D	154	69.095	36.482	28.191	1.000	14.81
ATOM	6616	C	ALA	D	154	67.240	37.026	26.557	1.000	21.98
ATOM	6617	O	ALA	D	154	66.100	37.430	26.300	1.000	20.90
ATOM	6618	N	SER	D	155	68.029	36.446	25.669	1.000	22.69
ATOM	6619	CA	SER	D	155	67.658	36.189	24.279	1.000	20.37
ATOM	6620	CB	SER	D	155	67.301	37.486	23.550	1.000	21.64
ATOM	6621	OG	SER	D	155	67.329	37.338	22.133	1.000	21.48
ATOM	6622	C	SER	D	155	68.801	35.494	23.554	1.000	18.34
ATOM	6623	O	SER	D	155	69.956	35.714	23.932	1.000	19.68
ATOM	6624	N	VAL	D	156	68.553	34.690	22.514	1.000	15.42
ATOM	6625	CA	VAL	D	156	69.710	34.158	21.782	1.000	17.65
ATOM	6626	CB	VAL	D	156	69.313	33.125	20.714	1.000	21.51
ATOM	6627	CG1	VAL	D	156	68.671	31.920	21.384	1.000	23.31
ATOM	6628	CG2	VAL	D	156	68.391	33.752	19.683	1.000	24.15
ATOM	6629	C	VAL	D	156	70.522	35.265	21.125	1.000	15.00
ATOM	6630	O	VAL	D	156	71.678	35.056	20.758	1.000	21.65
ATOM	6631	N	ALA	D	157	69.976	36.468	20.988	1.000	17.14
ATOM	6632	CA	ALA	D	157	70.710	37.651	20.578	1.000	17.24
ATOM	6633	CB	ALA	D	157	69.769	38.855	20.568	1.000	13.94
ATOM	6634	C	ALA	D	157	71.916	37.921	21.470	1.000	23.46
ATOM	6635	O	ALA	D	157	72.845	38.627	21.064	1.000	21.41
ATOM	6636	N	ALA	D	158	71.942	37.380	22.689	1.000	23.28
ATOM	6637	CA	ALA	D	158	73.113	37.504	23.546	1.000	23.19
ATOM	6638	CB	ALA	D	158	72.861	36.891	24.918	1.000	18.33
ATOM	6639	C	ALA	D	158	74.327	36.834	22.904	1.000	20.07
ATOM	6640	O	ALA	D	158	75.477	37.201	23.164	1.000	18.25
ATOM	6641	N	PHE	D	159	74.043	35.844	22.068	1.000	16.93
ATOM	6642	CA	PHE	D	159	75.090	34.998	21.504	1.000	20.37
ATOM	6643	CB	PHE	D	159	74.764	33.527	21.785	1.000	22.16
ATOM	6644	CG	PHE	D	159	74.507	33.240	23.261	1.000	23.66

ATOM	6645	CD1	PHE	D	159	73.247	32.850	23.687	1.000	24.05
ATOM	6646	CD2	PHE	D	159	75.528	33.361	24.184	1.000	21.58
ATOM	6647	CE1	PHE	D	159	72.996	32.585	25.025	1.000	21.33
ATOM	6648	CE2	PHE	D	159	75.285	33.112	25.522	1.000	26.43
ATOM	6649	CZ	PHE	D	159	74.024	32.723	25.940	1.000	22.81
ATOM	6650	C	PHE	D	159	75.301	35.191	20.004	1.000	26.53
ATOM	6651	O	PHE	D	159	76.448	35.093	19.557	1.000	22.13
ATOM	6652	N	GLU	D	160	74.247	35.455	19.235	1.000	22.81
ATOM	6653	CA	GLU	D	160	74.367	35.655	17.797	1.000	25.82
ATOM	6654	CB	GLU	D	160	73.868	34.471	16.977	1.000	26.92
ATOM	6655	CG	GLU	D	160	74.398	33.097	17.272	1.000	31.97
ATOM	6656	CD	GLU	D	160	73.390	32.186	17.945	1.000	33.94
ATOM	6657	OE1	GLU	D	160	73.834	31.464	18.863	1.000	27.97
ATOM	6658	OE2	GLU	D	160	72.188	32.168	17.592	1.000	26.48
ATOM	6659	C	GLU	D	160	73.553	36.876	17.356	1.000	21.87
ATOM	6660	O	GLU	D	160	72.678	36.727	16.497	1.000	19.91
ATOM	6661	N	GLY	D	161	73.821	38.038	17.936	1.000	18.43
ATOM	6662	CA	GLY	D	161	73.065	39.235	17.596	1.000	18.74
ATOM	6663	C	GLY	D	161	73.061	39.461	16.090	1.000	23.77
ATOM	6664	O	GLY	D	161	74.125	39.344	15.479	1.000	20.48
ATOM	6665	N	GLN	D	162	71.900	39.766	15.529	1.000	20.27
ATOM	6666	CA	GLN	D	162	71.720	39.960	14.104	1.000	23.42
ATOM	6667	CB	GLN	D	162	70.259	39.671	13.743	1.000	21.25
ATOM	6668	CG	GLN	D	162	69.841	38.219	13.946	1.000	23.82
ATOM	6669	CD	GLN	D	162	68.525	37.938	13.233	1.000	27.75
ATOM	6670	OE1	GLN	D	162	67.457	38.360	13.678	1.000	28.35
ATOM	6671	NE2	GLN	D	162	68.613	37.233	12.110	1.000	23.89
ATOM	6672	C	GLN	D	162	72.061	41.373	13.650	1.000	27.25
ATOM	6673	O	GLN	D	162	72.231	42.269	14.481	1.000	19.80
ATOM	6674	N	VAL	D	163	72.134	41.570	12.323	1.000	21.48
ATOM	6675	CA	VAL	D	163	72.258	42.948	11.835	1.000	19.83
ATOM	6676	CB	VAL	D	163	72.277	43.041	10.302	1.000	20.25
ATOM	6677	CG1	VAL	D	163	72.244	44.493	9.853	1.000	20.85
ATOM	6678	CG2	VAL	D	163	73.516	42.368	9.723	1.000	13.02
ATOM	6679	C	VAL	D	163	71.087	43.765	12.382	1.000	22.78
ATOM	6680	O	VAL	D	163	69.938	43.310	12.304	1.000	26.26
ATOM	6681	N	GLY	D	164	71.354	44.932	12.951	1.000	21.30
ATOM	6682	CA	GLY	D	164	70.329	45.774	13.539	1.000	20.37
ATOM	6683	C	GLY	D	164	70.094	45.539	15.021	1.000	22.49
ATOM	6684	O	GLY	D	164	69.353	46.305	15.649	1.000	24.72
ATOM	6685	N	GLN	D	165	70.695	44.515	15.613	1.000	23.42
ATOM	6686	CA	GLN	D	165	70.439	44.131	16.990	1.000	23.82
ATOM	6687	CB	GLN	D	165	70.290	42.598	17.070	1.000	22.26
ATOM	6688	CG	GLN	D	165	68.949	42.087	16.586	1.000	27.27
ATOM	6689	CD	GLN	D	165	68.682	40.656	16.998	1.000	27.39
ATOM	6690	OE1	GLN	D	165	69.560	39.798	16.983	1.000	23.93
ATOM	6691	NE2	GLN	D	165	67.434	40.395	17.379	1.000	30.12
ATOM	6692	C	GLN	D	165	71.506	44.522	18.001	1.000	23.76
ATOM	6693	O	GLN	D	165	71.501	43.947	19.103	1.000	24.07
ATOM	6694	N	ALA	D	166	72.408	45.444	17.708	1.000	17.21
ATOM	6695	CA	ALA	D	166	73.443	45.806	18.674	1.000	19.58
ATOM	6696	CB	ALA	D	166	74.299	46.938	18.104	1.000	21.71
ATOM	6697	C	ALA	D	166	72.925	46.236	20.043	1.000	21.41
ATOM	6698	O	ALA	D	166	73.392	45.739	21.072	1.000	21.84
ATOM	6699	N	ALA	D	167	71.987	47.182	20.137	1.000	19.77
ATOM	6700	CA	ALA	D	167	71.574	47.641	21.470	1.000	20.56
ATOM	6701	CB	ALA	D	167	70.649	48.841	21.357	1.000	19.93
ATOM	6702	C	ALA	D	167	70.916	46.514	22.258	1.000	23.33
ATOM	6703	O	ALA	D	167	71.250	46.237	23.410	1.000	23.45
ATOM	6704	N	TYR	D	168	69.963	45.845	21.612	1.000	21.23
ATOM	6705	CA	TYR	D	168	69.279	44.702	22.199	1.000	18.68

ATOM	6706	CB	TYR	D	168	68.301	44.123	21.175	1.000	19.46
ATOM	6707	CG	TYR	D	168	67.308	43.119	21.706	1.000	17.17
ATOM	6708	CD1	TYR	D	168	66.289	43.509	22.577	1.000	20.81
ATOM	6709	CE1	TYR	D	168	65.389	42.575	23.056	1.000	17.29
ATOM	6710	CD2	TYR	D	168	67.393	41.785	21.336	1.000	14.49
ATOM	6711	CE2	TYR	D	168	66.496	40.846	21.809	1.000	18.56
ATOM	6712	CZ	TYR	D	168	65.494	41.263	22.672	1.000	22.02
ATOM	6713	OH	TYR	D	168	64.599	40.334	23.142	1.000	21.10
ATOM	6714	C	TYR	D	168	70.264	43.634	22.647	1.000	22.16
ATOM	6715	O	TYR	D	168	70.176	43.093	23.750	1.000	22.67
ATOM	6716	N	SER	D	169	71.222	43.314	21.778	1.000	19.55
ATOM	6717	CA	SER	D	169	72.216	42.298	22.096	1.000	17.20
ATOM	6718	CB	SER	D	169	73.152	42.059	20.915	1.000	18.47
ATOM	6719	OG	SER	D	169	72.489	41.424	19.838	1.000	21.29
ATOM	6720	C	SER	D	169	73.023	42.705	23.328	1.000	20.02
ATOM	6721	O	SER	D	169	73.348	41.871	24.172	1.000	24.34
ATOM	6722	N	ALA	D	170	73.343	43.985	23.419	1.000	20.02
ATOM	6723	CA	ALA	D	170	74.107	44.518	24.540	1.000	17.28
ATOM	6724	CB	ALA	D	170	74.415	45.986	24.317	1.000	16.21
ATOM	6725	C	ALA	D	170	73.324	44.324	25.834	1.000	22.82
ATOM	6726	O	ALA	D	170	73.862	43.921	26.866	1.000	21.81
ATOM	6727	N	SER	D	171	72.027	44.617	25.765	1.000	19.01
ATOM	6728	CA	SER	D	171	71.196	44.486	26.965	1.000	20.11
ATOM	6729	CB	SER	D	171	69.838	45.160	26.723	1.000	18.33
ATOM	6730	OG	SER	D	171	68.954	44.319	26.011	1.000	16.83
ATOM	6731	C	SER	D	171	71.042	43.034	27.378	1.000	18.43
ATOM	6732	O	SER	D	171	71.058	42.715	28.571	1.000	25.54
ATOM	6733	N	LYS	D	172	70.894	42.104	26.438	1.000	16.24
ATOM	6734	CA	LYS	D	172	70.682	40.710	26.836	1.000	18.91
ATOM	6735	CB	LYS	D	172	69.934	39.934	25.747	1.000	18.86
ATOM	6736	CG	LYS	D	172	68.587	40.565	25.386	1.000	18.26
ATOM	6737	CD	LYS	D	172	67.692	40.665	26.608	1.000	22.32
ATOM	6738	CE	LYS	D	172	66.249	40.992	26.239	1.000	20.18
ATOM	6739	NZ	LYS	D	172	65.329	40.645	27.368	1.000	15.72
ATOM	6740	C	LYS	D	172	72.001	40.028	27.183	1.000	22.11
ATOM	6741	O	LYS	D	172	72.064	39.103	27.992	1.000	18.61
ATOM	6742	N	GLY	D	173	73.093	40.486	26.578	1.000	22.19
ATOM	6743	CA	GLY	D	173	74.416	39.982	26.932	1.000	21.20
ATOM	6744	C	GLY	D	173	74.755	40.367	28.368	1.000	24.62
ATOM	6745	O	GLY	D	173	75.413	39.611	29.088	1.000	19.92
ATOM	6746	N	GLY	D	174	74.290	41.550	28.754	1.000	18.59
ATOM	6747	CA	GLY	D	174	74.439	42.031	30.122	1.000	20.37
ATOM	6748	C	GLY	D	174	73.709	41.098	31.069	1.000	18.89
ATOM	6749	O	GLY	D	174	74.213	40.687	32.107	1.000	18.97
ATOM	6750	N	ILE	D	175	72.486	40.722	30.700	1.000	20.45
ATOM	6751	CA	ILE	D	175	71.723	39.800	31.524	1.000	17.82
ATOM	6752	CB	ILE	D	175	70.355	39.443	30.914	1.000	20.89
ATOM	6753	CG2	ILE	D	175	69.652	38.433	31.819	1.000	20.20
ATOM	6754	CG1	ILE	D	175	69.440	40.623	30.598	1.000	23.10
ATOM	6755	CD1	ILE	D	175	68.826	41.265	31.823	1.000	32.75
ATOM	6756	C	ILE	D	175	72.507	38.502	31.715	1.000	21.19
ATOM	6757	O	ILE	D	175	72.707	38.002	32.820	1.000	19.56
ATOM	6758	N	VAL	D	176	72.955	37.955	30.580	1.000	14.04
ATOM	6759	CA	VAL	D	176	73.713	36.712	30.628	1.000	11.58
ATOM	6760	CB	VAL	D	176	74.130	36.242	29.227	1.000	17.57
ATOM	6761	CG1	VAL	D	176	75.234	35.197	29.299	1.000	17.28
ATOM	6762	CG2	VAL	D	176	72.935	35.658	28.488	1.000	17.75
ATOM	6763	C	VAL	D	176	74.926	36.885	31.530	1.000	17.55
ATOM	6764	O	VAL	D	176	75.165	36.092	32.446	1.000	21.64
ATOM	6765	N	GLY	D	177	75.699	37.937	31.293	1.000	18.96
ATOM	6766	CA	GLY	D	177	76.901	38.179	32.074	1.000	22.45

ATOM	6767	C	GLY	D	177	76.665	38.201	33.569	1.000	23.71
ATOM	6768	O	GLY	D	177	77.389	37.578	34.353	1.000	23.04
ATOM	6769	N	MET	D	178	75.642	38.921	34.024	1.000	20.74
ATOM	6770	CA	MET	D	178	75.510	39.100	35.474	1.000	16.25
ATOM	6771	CB	MET	D	178	74.805	40.429	35.761	1.000	17.85
ATOM	6772	CG	MET	D	178	73.310	40.419	35.552	1.000	20.61
ATOM	6773	SD	MET	D	178	72.557	42.064	35.615	1.000	22.26
ATOM	6774	CE	MET	D	178	70.829	41.601	35.430	1.000	20.09
ATOM	6775	C	MET	D	178	74.798	37.935	36.138	1.000	21.07
ATOM	6776	O	MET	D	178	74.650	37.936	37.365	1.000	26.74
ATOM	6777	N	THR	D	179	74.365	36.937	35.377	1.000	17.91
ATOM	6778	CA	THR	D	179	73.662	35.794	35.963	1.000	17.03
ATOM	6779	CB	THR	D	179	73.222	34.809	34.867	1.000	17.80
ATOM	6780	OG1	THR	D	179	72.125	35.389	34.132	1.000	20.57
ATOM	6781	CG2	THR	D	179	72.653	33.530	35.435	1.000	13.48
ATOM	6782	C	THR	D	179	74.503	35.081	37.016	1.000	24.62
ATOM	6783	O	THR	D	179	74.029	34.783	38.118	1.000	19.91
ATOM	6784	N	LEU	D	180	75.766	34.780	36.726	1.000	22.11
ATOM	6785	CA	LEU	D	180	76.579	34.011	37.660	1.000	20.85
ATOM	6786	CB	LEU	D	180	77.853	33.468	37.000	1.000	17.23
ATOM	6787	CG	LEU	D	180	78.726	32.563	37.868	1.000	23.31
ATOM	6788	CD1	LEU	D	180	77.953	31.346	38.359	1.000	24.22
ATOM	6789	CD2	LEU	D	180	79.961	32.102	37.105	1.000	20.74
ATOM	6790	C	LEU	D	180	76.966	34.827	38.885	1.000	17.46
ATOM	6791	O	LEU	D	180	76.746	34.341	40.005	1.000	22.39
ATOM	6792	N	PRO	D	181	77.537	36.015	38.738	1.000	20.05
ATOM	6793	CD	PRO	D	181	77.909	36.728	37.503	1.000	20.38
ATOM	6794	CA	PRO	D	181	77.888	36.811	39.924	1.000	19.83
ATOM	6795	CB	PRO	D	181	78.326	38.161	39.362	1.000	21.03
ATOM	6796	CG	PRO	D	181	77.874	38.169	37.937	1.000	18.92
ATOM	6797	C	PRO	D	181	76.689	37.006	40.852	1.000	27.11
ATOM	6798	O	PRO	D	181	76.820	36.935	42.073	1.000	21.78
ATOM	6799	N	ILE	D	182	75.503	37.244	40.292	1.000	19.37
ATOM	6800	CA	ILE	D	182	74.352	37.452	41.183	1.000	21.03
ATOM	6801	CB	ILE	D	182	73.147	38.033	40.425	1.000	21.11
ATOM	6802	CG2	ILE	D	182	71.913	38.080	41.319	1.000	21.57
ATOM	6803	CG1	ILE	D	182	73.455	39.408	39.820	1.000	16.88
ATOM	6804	CD1	ILE	D	182	72.306	40.003	39.025	1.000	17.64
ATOM	6805	C	ILE	D	182	74.017	36.152	41.893	1.000	23.82
ATOM	6806	O	ILE	D	182	73.800	36.167	43.107	1.000	26.22
ATOM	6807	N	ALA	D	183	74.005	35.031	41.184	1.000	17.60
ATOM	6808	CA	ALA	D	183	73.869	33.728	41.811	1.000	19.31
ATOM	6809	CB	ALA	D	183	74.016	32.621	40.773	1.000	21.49
ATOM	6810	C	ALA	D	183	74.896	33.551	42.927	1.000	26.28
ATOM	6811	O	ALA	D	183	74.589	33.085	44.030	1.000	23.11
ATOM	6812	N	ARG	D	184	76.151	33.915	42.660	1.000	22.78
ATOM	6813	CA	ARG	D	184	77.187	33.722	43.684	1.000	22.18
ATOM	6814	CB	ARG	D	184	78.580	33.916	43.085	1.000	18.95
ATOM	6815	CG	ARG	D	184	78.931	32.878	42.009	1.000	17.71
ATOM	6816	CD	ARG	D	184	80.151	33.303	41.199	1.000	17.27
ATOM	6817	NE	ARG	D	184	80.957	32.169	40.756	1.000	22.17
ATOM	6818	CZ	ARG	D	184	82.097	32.262	40.075	1.000	20.70
ATOM	6819	NH1	ARG	D	184	82.769	31.175	39.713	1.000	18.72
ATOM	6820	NH2	ARG	D	184	82.604	33.433	39.729	1.000	20.42
ATOM	6821	C	ARG	D	184	76.928	34.665	44.856	1.000	21.95
ATOM	6822	O	ARG	D	184	77.117	34.326	46.023	1.000	20.58
ATOM	6823	N	ASP	D	185	76.481	35.880	44.553	1.000	17.40
ATOM	6824	CA	ASP	D	185	76.133	36.868	45.559	1.000	21.73
ATOM	6825	CB	ASP	D	185	75.556	38.119	44.889	1.000	23.14
ATOM	6826	CG	ASP	D	185	76.585	39.134	44.439	1.000	24.36
ATOM	6827	OD1	ASP	D	185	76.175	40.163	43.853	1.000	18.99

ATOM	6828	OD2	ASP	D	185	77.797	38.915	44.663	1.000	18.75
ATOM	6829	C	ASP	D	185	75.106	36.341	46.558	1.000	24.87
ATOM	6830	O	ASP	D	185	75.252	36.478	47.770	1.000	21.06
ATOM	6831	N	LEU	D	186	74.045	35.743	46.034	1.000	19.83
ATOM	6832	CA	LEU	D	186	72.899	35.313	46.806	1.000	19.79
ATOM	6833	CB	LEU	D	186	71.614	35.532	45.994	1.000	20.78
ATOM	6834	CG	LEU	D	186	71.429	36.936	45.408	1.000	20.00
ATOM	6835	CD1	LEU	D	186	70.170	37.010	44.564	1.000	19.62
ATOM	6836	CD2	LEU	D	186	71.393	37.976	46.520	1.000	19.25
ATOM	6837	C	LEU	D	186	73.005	33.854	47.219	1.000	22.76
ATOM	6838	O	LEU	D	186	72.143	33.371	47.959	1.000	23.72
ATOM	6839	N	ALA	D	187	74.028	33.132	46.764	1.000	15.74
ATOM	6840	CA	ALA	D	187	74.188	31.740	47.180	1.000	17.58
ATOM	6841	CB	ALA	D	187	75.487	31.143	46.634	1.000	15.12
ATOM	6842	C	ALA	D	187	74.159	31.552	48.696	1.000	23.20
ATOM	6843	O	ALA	D	187	73.479	30.621	49.150	1.000	21.94
ATOM	6844	N	PRO	D	188	74.875	32.326	49.499	1.000	29.64
ATOM	6845	CD	PRO	D	188	75.803	33.421	49.152	1.000	28.61
ATOM	6846	CA	PRO	D	188	74.830	32.099	50.954	1.000	30.11
ATOM	6847	CB	PRO	D	188	75.861	33.088	51.519	1.000	29.57
ATOM	6848	CG	PRO	D	188	76.705	33.486	50.354	1.000	33.79
ATOM	6849	C	PRO	D	188	73.473	32.383	51.576	1.000	32.97
ATOM	6850	O	PRO	D	188	73.255	32.077	52.759	1.000	31.98
ATOM	6851	N	ILE	D	189	72.517	32.962	50.845	1.000	29.31
ATOM	6852	CA	ILE	D	189	71.210	33.125	51.505	1.000	26.68
ATOM	6853	CB	ILE	D	189	70.758	34.590	51.557	1.000	30.84
ATOM	6854	CG2	ILE	D	189	71.669	35.406	52.466	1.000	35.78
ATOM	6855	CG1	ILE	D	189	70.637	35.290	50.199	1.000	24.66
ATOM	6856	CD1	ILE	D	189	70.003	36.662	50.353	1.000	27.16
ATOM	6857	C	ILE	D	189	70.141	32.266	50.844	1.000	23.68
ATOM	6858	O	ILE	D	189	68.958	32.358	51.180	1.000	25.41
ATOM	6859	N	GLY	D	190	70.549	31.397	49.922	1.000	19.61
ATOM	6860	CA	GLY	D	190	69.627	30.428	49.369	1.000	20.36
ATOM	6861	C	GLY	D	190	68.728	30.959	48.283	1.000	23.23
ATOM	6862	O	GLY	D	190	67.612	30.458	48.095	1.000	25.02
ATOM	6863	N	ILE	D	191	69.182	31.962	47.526	1.000	17.82
ATOM	6864	CA	ILE	D	191	68.337	32.406	46.411	1.000	20.45
ATOM	6865	CB	ILE	D	191	68.109	33.923	46.468	1.000	20.65
ATOM	6866	CG2	ILE	D	191	67.353	34.418	45.249	1.000	21.25
ATOM	6867	CG1	ILE	D	191	67.405	34.371	47.764	1.000	20.50
ATOM	6868	CD1	ILE	D	191	67.413	35.881	47.921	1.000	22.01
ATOM	6869	C	ILE	D	191	68.967	31.985	45.089	1.000	23.63
ATOM	6870	O	ILE	D	191	70.081	32.408	44.781	1.000	23.08
ATOM	6871	N	ARG	D	192	68.262	31.147	44.326	1.000	20.80
ATOM	6872	CA	ARG	D	192	68.796	30.736	43.025	1.000	18.93
ATOM	6873	CB	ARG	D	192	68.201	29.418	42.545	1.000	18.33
ATOM	6874	CG	ARG	D	192	68.551	28.224	43.416	1.000	22.10
ATOM	6875	CD	ARG	D	192	68.122	26.915	42.778	1.000	21.75
ATOM	6876	NE	ARG	D	192	66.697	26.654	42.903	1.000	17.92
ATOM	6877	CZ	ARG	D	192	65.845	26.507	41.903	1.000	22.86
ATOM	6878	NH1	ARG	D	192	66.271	26.602	40.645	1.000	20.64
ATOM	6879	NH2	ARG	D	192	64.562	26.265	42.159	1.000	21.71
ATOM	6880	C	ARG	D	192	68.527	31.823	41.989	1.000	20.00
ATOM	6881	O	ARG	D	192	67.505	32.498	42.062	1.000	18.87
ATOM	6882	N	VAL	D	193	69.451	31.960	41.050	1.000	23.51
ATOM	6883	CA	VAL	D	193	69.317	32.881	39.924	1.000	20.41
ATOM	6884	CB	VAL	D	193	70.296	34.057	39.981	1.000	18.86
ATOM	6885	CG1	VAL	D	193	69.897	35.108	38.951	1.000	21.21
ATOM	6886	CG2	VAL	D	193	70.350	34.707	41.353	1.000	18.23
ATOM	6887	C	VAL	D	193	69.512	32.096	38.623	1.000	20.97
ATOM	6888	O	VAL	D	193	70.555	31.457	38.454	1.000	17.73

ATOM	6889	N	MET	D	194	68.513	32.133	37.756	1.000	20.64
ATOM	6890	CA	MET	D	194	68.529	31.440	36.476	1.000	22.07
ATOM	6891	CB	MET	D	194	67.648	30.190	36.500	1.000	21.33
ATOM	6892	CG	MET	D	194	68.224	29.017	37.281	1.000	20.38
ATOM	6893	SD	MET	D	194	69.616	28.228	36.442	1.000	20.76
ATOM	6894	CE	MET	D	194	68.837	27.768	34.884	1.000	17.01
ATOM	6895	C	MET	D	194	68.073	32.356	35.339	1.000	27.30
ATOM	6896	O	MET	D	194	67.397	33.367	35.539	1.000	21.16
ATOM	6897	N	THR	D	195	68.455	31.985	34.114	1.000	23.91
ATOM	6898	CA	THR	D	195	68.128	32.823	32.962	1.000	20.67
ATOM	6899	CB	THR	D	195	69.312	33.716	32.570	1.000	18.13
ATOM	6900	OG1	THR	D	195	69.548	34.706	33.575	1.000	19.08
ATOM	6901	CG2	THR	D	195	68.991	34.480	31.288	1.000	22.37
ATOM	6902	C	THR	D	195	67.724	31.964	31.771	1.000	18.10
ATOM	6903	O	THR	D	195	68.327	30.934	31.484	1.000	22.46
ATOM	6904	N	ILE	D	196	66.684	32.390	31.071	1.000	18.33
ATOM	6905	CA	ILE	D	196	66.212	31.696	29.883	1.000	20.86
ATOM	6906	CB	ILE	D	196	64.703	31.394	29.937	1.000	22.77
ATOM	6907	CG2	ILE	D	196	64.239	30.731	28.643	1.000	14.26
ATOM	6908	CG1	ILE	D	196	64.281	30.579	31.162	1.000	18.84
ATOM	6909	CD1	ILE	D	196	62.793	30.588	31.442	1.000	22.27
ATOM	6910	C	ILE	D	196	66.532	32.575	28.673	1.000	20.83
ATOM	6911	O	ILE	D	196	66.290	33.784	28.750	1.000	20.98
ATOM	6912	N	ALA	D	197	67.078	31.999	27.608	1.000	17.54
ATOM	6913	CA	ALA	D	197	67.345	32.773	26.391	1.000	20.67
ATOM	6914	CB	ALA	D	197	68.792	32.645	25.951	1.000	13.19
ATOM	6915	C	ALA	D	197	66.403	32.309	25.282	1.000	17.72
ATOM	6916	O	ALA	D	197	66.687	31.344	24.578	1.000	18.42
ATOM	6917	N	PRO	D	198	65.261	32.961	25.124	1.000	17.47
ATOM	6918	CD	PRO	D	198	64.771	34.152	25.846	1.000	15.15
ATOM	6919	CA	PRO	D	198	64.300	32.495	24.121	1.000	17.20
ATOM	6920	CB	PRO	D	198	63.032	33.292	24.430	1.000	17.15
ATOM	6921	CG	PRO	D	198	63.273	33.967	25.750	1.000	17.24
ATOM	6922	C	PRO	D	198	64.791	32.817	22.712	1.000	22.31
ATOM	6923	O	PRO	D	198	65.467	33.829	22.497	1.000	19.83
ATOM	6924	N	GLY	D	199	64.436	31.965	21.749	1.000	17.55
ATOM	6925	CA	GLY	D	199	64.755	32.287	20.357	1.000	21.07
ATOM	6926	C	GLY	D	199	63.681	33.220	19.807	1.000	24.15
ATOM	6927	O	GLY	D	199	63.736	34.427	20.012	1.000	27.73
ATOM	6928	N	LEU	D	200	62.713	32.635	19.118	1.000	24.38
ATOM	6929	CA	LEU	D	200	61.623	33.365	18.488	1.000	24.40
ATOM	6930	CB	LEU	D	200	61.721	33.221	16.967	1.000	28.91
ATOM	6931	CG	LEU	D	200	63.108	33.444	16.346	1.000	27.16
ATOM	6932	CD1	LEU	D	200	63.130	32.970	14.899	1.000	24.33
ATOM	6933	CD2	LEU	D	200	63.516	34.904	16.436	1.000	25.63
ATOM	6934	C	LEU	D	200	60.277	32.847	18.981	1.000	18.97
ATOM	6935	O	LEU	D	200	60.000	31.656	18.864	1.000	22.53
ATOM	6936	N	PHE	D	201	59.451	33.728	19.530	1.000	18.45
ATOM	6937	CA	PHE	D	201	58.189	33.308	20.124	1.000	22.22
ATOM	6938	CB	PHE	D	201	58.225	33.382	21.657	1.000	17.08
ATOM	6939	CG	PHE	D	201	58.836	32.160	22.310	1.000	21.74
ATOM	6940	CD1	PHE	D	201	60.205	31.942	22.252	1.000	19.60
ATOM	6941	CD2	PHE	D	201	58.040	31.245	22.973	1.000	22.47
ATOM	6942	CE1	PHE	D	201	60.756	30.818	22.845	1.000	18.88
ATOM	6943	CE2	PHE	D	201	58.586	30.117	23.556	1.000	23.20
ATOM	6944	CZ	PHE	D	201	59.952	29.898	23.490	1.000	18.53
ATOM	6945	C	PHE	D	201	57.036	34.178	19.635	1.000	23.36
ATOM	6946	O	PHE	D	201	57.182	35.383	19.451	1.000	24.36
ATOM	6947	N	GLY	D	202	55.883	33.547	19.455	1.000	26.66
ATOM	6948	CA	GLY	D	202	54.685	34.243	19.015	1.000	29.50
ATOM	6949	C	GLY	D	202	54.093	35.130	20.095	1.000	28.23

ATOM	6950	O	GLY	D	202	53.208	34.713	20.838	1.000	32.75
ATOM	6951	N	THR	D	203	54.592	36.358	20.189	1.000	26.75
ATOM	6952	CA	THR	D	203	54.092	37.329	21.155	1.000	26.92
ATOM	6953	CB	THR	D	203	55.088	37.519	22.314	1.000	27.56
ATOM	6954	OG1	THR	D	203	56.204	38.265	21.819	1.000	25.50
ATOM	6955	CG2	THR	D	203	55.616	36.186	22.821	1.000	27.78
ATOM	6956	C	THR	D	203	53.858	38.666	20.461	1.000	29.42
ATOM	6957	O	THR	D	203	54.258	38.806	19.297	1.000	24.92
ATOM	6958	N	PRO	D	204	53.218	39.635	21.103	1.000	27.18
ATOM	6959	CD	PRO	D	204	52.478	39.519	22.386	1.000	31.23
ATOM	6960	CA	PRO	D	204	53.106	40.986	20.553	1.000	28.92
ATOM	6961	CB	PRO	D	204	52.302	41.731	21.634	1.000	28.70
ATOM	6962	CG	PRO	D	204	51.473	40.641	22.248	1.000	28.07
ATOM	6963	C	PRO	D	204	54.434	41.703	20.347	1.000	34.10
ATOM	6964	O	PRO	D	204	54.463	42.748	19.681	1.000	27.57
ATOM	6965	N	LEU	D	205	55.538	41.207	20.886	1.000	36.63
ATOM	6966	CA	LEU	D	205	56.839	41.839	20.646	1.000	31.29
ATOM	6967	CB	LEU	D	205	57.970	41.039	21.289	1.000	25.52
ATOM	6968	CG	LEU	D	205	59.327	41.738	21.381	1.000	33.83
ATOM	6969	CD1	LEU	D	205	59.273	42.904	22.357	1.000	31.80
ATOM	6970	CD2	LEU	D	205	60.421	40.756	21.777	1.000	30.03
ATOM	6971	C	LEU	D	205	57.101	41.988	19.140	1.000	27.67
ATOM	6972	O	LEU	D	205	57.624	43.019	18.719	1.000	29.68
ATOM	6973	N	LEU	D	206	56.733	40.950	18.405	1.000	22.15
ATOM	6974	CA	LEU	D	206	56.956	40.766	16.983	1.000	35.07
ATOM	6975	CB	LEU	D	206	57.054	39.268	16.650	1.000	30.73
ATOM	6976	CG	LEU	D	206	58.128	38.495	17.421	1.000	32.57
ATOM	6977	CD1	LEU	D	206	58.364	37.143	16.772	1.000	23.12
ATOM	6978	CD2	LEU	D	206	59.406	39.318	17.516	1.000	28.08
ATOM	6979	C	LEU	D	206	55.868	41.380	16.110	1.000	38.19
ATOM	6980	O	LEU	D	206	55.972	41.388	14.881	1.000	44.19
ATOM	6981	N	THR	D	207	54.818	41.901	16.733	1.000	35.74
ATOM	6982	CA	THR	D	207	53.710	42.454	15.950	1.000	36.62
ATOM	6983	CB	THR	D	207	52.642	42.991	16.923	1.000	42.60
ATOM	6984	OG1	THR	D	207	51.904	41.854	17.406	1.000	42.42
ATOM	6985	CG2	THR	D	207	51.661	43.916	16.235	1.000	51.83
ATOM	6986	C	THR	D	207	54.164	43.523	14.976	1.000	37.29
ATOM	6987	O	THR	D	207	53.783	43.529	13.800	1.000	36.09
ATOM	6988	N	SER	D	208	55.003	44.456	15.420	1.000	37.42
ATOM	6989	CA	SER	D	208	55.423	45.544	14.547	1.000	36.45
ATOM	6990	CB	SER	D	208	56.185	46.605	15.354	1.000	35.67
ATOM	6991	OG	SER	D	208	57.285	46.018	16.032	1.000	47.68
ATOM	6992	C	SER	D	208	56.301	45.092	13.389	1.000	42.44
ATOM	6993	O	SER	D	208	56.751	45.943	12.609	1.000	62.16
ATOM	6994	N	LEU	D	209	56.581	43.800	13.229	1.000	31.60
ATOM	6995	CA	LEU	D	209	57.357	43.396	12.058	1.000	32.92
ATOM	6996	CB	LEU	D	209	58.180	42.136	12.299	1.000	35.21
ATOM	6997	CG	LEU	D	209	59.199	42.141	13.437	1.000	37.69
ATOM	6998	CD1	LEU	D	209	59.658	40.717	13.734	1.000	26.82
ATOM	6999	CD2	LEU	D	209	60.373	43.050	13.107	1.000	40.66
ATOM	7000	C	LEU	D	209	56.412	43.134	10.888	1.000	40.62
ATOM	7001	O	LEU	D	209	55.250	42.782	11.113	1.000	53.21
ATOM	7002	N	PRO	D	210	56.905	43.287	9.666	1.000	40.78
ATOM	7003	CD	PRO	D	210	58.218	43.811	9.264	1.000	44.53
ATOM	7004	CA	PRO	D	210	56.087	42.897	8.513	1.000	33.12
ATOM	7005	CB	PRO	D	210	56.967	43.192	7.308	1.000	39.69
ATOM	7006	CG	PRO	D	210	58.040	44.099	7.801	1.000	44.13
ATOM	7007	C	PRO	D	210	55.796	41.405	8.614	1.000	36.19
ATOM	7008	O	PRO	D	210	56.693	40.624	8.946	1.000	42.06
ATOM	7009	N	GLU	D	211	54.557	41.025	8.332	1.000	38.31
ATOM	7010	CA	GLU	D	211	54.148	39.627	8.332	1.000	37.48

ATOM	7011	CB	GLU	D	211	52.757	39.506	7.704	1.000	39.60
ATOM	7012	CG	GLU	D	211	52.665	38.453	6.614	1.000	49.11
ATOM	7013	CD	GLU	D	211	52.074	37.151	7.118	1.000	61.74
ATOM	7014	OE1	GLU	D	211	51.238	36.564	6.399	1.000	74.58
ATOM	7015	OE2	GLU	D	211	52.450	36.715	8.230	1.000	74.33
ATOM	7016	C	GLU	D	211	55.138	38.739	7.586	1.000	42.31
ATOM	7017	O	GLU	D	211	55.365	37.585	7.954	1.000	36.56
ATOM	7018	N	LYS	D	212	55.738	39.262	6.519	1.000	45.52
ATOM	7019	CA	LYS	D	212	56.702	38.481	5.748	1.000	50.03
ATOM	7020	CB	LYS	D	212	57.078	39.216	4.469	1.000	48.73
ATOM	7021	C	LYS	D	212	57.937	38.146	6.580	1.000	45.32
ATOM	7022	O	LYS	D	212	58.293	36.969	6.677	1.000	61.00
ATOM	7023	N	VAL	D	213	58.583	39.142	7.177	1.000	37.48
ATOM	7024	CA	VAL	D	213	59.729	38.909	8.051	1.000	40.78
ATOM	7025	CB	VAL	D	213	60.171	40.192	8.779	1.000	39.38
ATOM	7026	CG1	VAL	D	213	61.448	39.944	9.570	1.000	46.30
ATOM	7027	CG2	VAL	D	213	60.376	41.330	7.794	1.000	31.44
ATOM	7028	C	VAL	D	213	59.407	37.836	9.091	1.000	42.11
ATOM	7029	O	VAL	D	213	60.143	36.868	9.280	1.000	39.28
ATOM	7030	N	ARG	D	214	58.272	38.029	9.760	1.000	43.00
ATOM	7031	CA	ARG	D	214	57.786	37.063	10.736	1.000	46.17
ATOM	7032	CB	ARG	D	214	56.400	37.494	11.234	1.000	50.42
ATOM	7033	CG	ARG	D	214	56.061	36.950	12.611	1.000	56.83
ATOM	7034	CD	ARG	D	214	55.009	37.791	13.317	1.000	65.91
ATOM	7035	NE	ARG	D	214	53.760	37.850	12.561	1.000	69.02
ATOM	7036	CZ	ARG	D	214	53.306	38.955	11.979	1.000	65.60
ATOM	7037	NH1	ARG	D	214	54.004	40.080	12.073	1.000	45.07
ATOM	7038	NH2	ARG	D	214	52.163	38.933	11.308	1.000	67.95
ATOM	7039	C	ARG	D	214	57.728	35.645	10.179	1.000	41.11
ATOM	7040	O	ARG	D	214	58.314	34.726	10.761	1.000	35.07
ATOM	7041	N	ASN	D	215	57.034	35.415	9.062	1.000	30.80
ATOM	7042	CA	ASN	D	215	56.975	34.059	8.515	1.000	31.83
ATOM	7043	CB	ASN	D	215	56.004	33.938	7.338	1.000	37.92
ATOM	7044	CG	ASN	D	215	54.623	34.458	7.692	1.000	43.95
ATOM	7045	OD1	ASN	D	215	54.286	34.601	8.868	1.000	50.88
ATOM	7046	ND2	ASN	D	215	53.821	34.753	6.678	1.000	41.53
ATOM	7047	C	ASN	D	215	58.356	33.591	8.078	1.000	26.95
ATOM	7048	O	ASN	D	215	58.701	32.421	8.239	1.000	38.41
ATOM	7049	N	PHE	D	216	59.168	34.494	7.535	1.000	29.37
ATOM	7050	CA	PHE	D	216	60.509	34.039	7.173	1.000	32.74
ATOM	7051	CB	PHE	D	216	61.264	35.120	6.393	1.000	39.51
ATOM	7052	CG	PHE	D	216	62.718	34.703	6.173	1.000	50.14
ATOM	7053	CD1	PHE	D	216	63.025	33.727	5.238	1.000	49.41
ATOM	7054	CD2	PHE	D	216	63.742	35.278	6.902	1.000	50.29
ATOM	7055	CE1	PHE	D	216	64.335	33.334	5.035	1.000	44.06
ATOM	7056	CE2	PHE	D	216	65.054	34.893	6.701	1.000	46.56
ATOM	7057	CZ	PHE	D	216	65.348	33.918	5.769	1.000	46.69
ATOM	7058	C	PHE	D	216	61.305	33.649	8.414	1.000	39.85
ATOM	7059	O	PHE	D	216	62.079	32.688	8.442	1.000	30.19
ATOM	7060	N	LEU	D	217	61.137	34.418	9.490	1.000	37.21
ATOM	7061	CA	LEU	D	217	61.880	34.075	10.706	1.000	37.90
ATOM	7062	CB	LEU	D	217	61.666	35.177	11.744	1.000	34.46
ATOM	7063	CG	LEU	D	217	62.236	36.544	11.361	1.000	39.81
ATOM	7064	CD1	LEU	D	217	61.332	37.662	11.855	1.000	60.47
ATOM	7065	CD2	LEU	D	217	63.649	36.688	11.905	1.000	46.98
ATOM	7066	C	LEU	D	217	61.451	32.719	11.245	1.000	36.78
ATOM	7067	O	LEU	D	217	62.230	31.827	11.578	1.000	29.88
ATOM	7068	N	ALA	D	218	60.133	32.559	11.332	1.000	43.92
ATOM	7069	CA	ALA	D	218	59.557	31.298	11.776	1.000	43.98
ATOM	7070	CB	ALA	D	218	58.040	31.379	11.691	1.000	38.83
ATOM	7071	C	ALA	D	218	60.094	30.130	10.954	1.000	40.99

ATOM	7072	O	ALA	D	218	60.383	29.067	11.503	1.000	32.70
ATOM	7073	N	SER	D	219	60.227	30.335	9.647	1.000	34.44
ATOM	7074	CA	SER	D	219	60.633	29.263	8.743	1.000	35.59
ATOM	7075	CB	SER	D	219	60.428	29.707	7.285	1.000	23.01
ATOM	7076	OG	SER	D	219	61.418	30.652	6.916	1.000	30.06
ATOM	7077	C	SER	D	219	62.072	28.823	8.963	1.000	33.93
ATOM	7078	O	SER	D	219	62.477	27.748	8.509	1.000	33.39
ATOM	7079	N	GLN	D	220	62.897	29.608	9.655	1.000	30.98
ATOM	7080	CA	GLN	D	220	64.276	29.166	9.859	1.000	27.90
ATOM	7081	CB	GLN	D	220	65.195	30.396	9.853	1.000	36.24
ATOM	7082	CG	GLN	D	220	65.232	31.099	8.503	1.000	46.18
ATOM	7083	CD	GLN	D	220	66.163	30.411	7.518	1.000	54.81
ATOM	7084	OE1	GLN	D	220	65.767	29.453	6.849	1.000	66.52
ATOM	7085	NE2	GLN	D	220	67.395	30.899	7.444	1.000	60.18
ATOM	7086	C	GLN	D	220	64.496	28.378	11.136	1.000	28.60
ATOM	7087	O	GLN	D	220	65.625	27.979	11.455	1.000	28.34
ATOM	7088	N	VAL	D	221	63.440	28.128	11.908	1.000	25.05
ATOM	7089	CA	VAL	D	221	63.609	27.295	13.105	1.000	19.69
ATOM	7090	CB	VAL	D	221	62.413	27.458	14.059	1.000	20.39
ATOM	7091	CG1	VAL	D	221	62.610	26.648	15.335	1.000	17.64
ATOM	7092	CG2	VAL	D	221	62.203	28.931	14.383	1.000	18.24
ATOM	7093	C	VAL	D	221	63.780	25.845	12.681	1.000	23.22
ATOM	7094	O	VAL	D	221	62.887	25.317	12.012	1.000	24.53
ATOM	7095	N	PRO	D	222	64.880	25.184	13.016	1.000	24.73
ATOM	7096	CD	PRO	D	222	66.023	25.665	13.817	1.000	24.93
ATOM	7097	CA	PRO	D	222	65.088	23.800	12.563	1.000	21.41
ATOM	7098	CB	PRO	D	222	66.427	23.404	13.205	1.000	16.76
ATOM	7099	CG	PRO	D	222	67.124	24.722	13.388	1.000	21.93
ATOM	7100	C	PRO	D	222	64.003	22.834	13.008	1.000	29.64
ATOM	7101	O	PRO	D	222	63.404	22.156	12.161	1.000	28.28
ATOM	7102	N	PHE	D	223	63.736	22.722	14.313	1.000	23.80
ATOM	7103	CA	PHE	D	223	62.666	21.830	14.735	1.000	22.47
ATOM	7104	CB	PHE	D	223	63.024	20.345	14.635	1.000	23.46
ATOM	7105	CG	PHE	D	223	61.800	19.501	14.996	1.000	26.96
ATOM	7106	CD1	PHE	D	223	60.745	19.389	14.106	1.000	27.25
ATOM	7107	CD2	PHE	D	223	61.727	18.848	16.214	1.000	24.04
ATOM	7108	CE1	PHE	D	223	59.625	18.638	14.426	1.000	26.15
ATOM	7109	CE2	PHE	D	223	60.612	18.098	16.536	1.000	24.75
ATOM	7110	CZ	PHE	D	223	59.556	17.995	15.647	1.000	24.07
ATOM	7111	C	PHE	D	223	62.245	22.127	16.172	1.000	27.70
ATOM	7112	O	PHE	D	223	63.118	22.190	17.041	1.000	26.86
ATOM	7113	N	PRO	D	224	60.960	22.305	16.446	1.000	29.69
ATOM	7114	CD	PRO	D	224	60.423	22.503	17.808	1.000	28.64
ATOM	7115	CA	PRO	D	224	59.899	22.326	15.434	1.000	28.89
ATOM	7116	CB	PRO	D	224	58.618	22.234	16.255	1.000	31.37
ATOM	7117	CG	PRO	D	224	58.975	22.838	17.575	1.000	30.74
ATOM	7118	C	PRO	D	224	59.930	23.631	14.638	1.000	27.50
ATOM	7119	O	PRO	D	224	60.332	24.659	15.179	1.000	23.79
ATOM	7120	N	SER	D	225	59.562	23.535	13.368	1.000	26.30
ATOM	7121	CA	SER	D	225	59.718	24.654	12.448	1.000	30.56
ATOM	7122	CB	SER	D	225	59.863	24.205	10.995	1.000	39.18
ATOM	7123	OG	SER	D	225	60.424	22.921	10.825	1.000	56.39
ATOM	7124	C	SER	D	225	58.529	25.608	12.578	1.000	29.67
ATOM	7125	O	SER	D	225	57.621	25.653	11.753	1.000	27.17
ATOM	7126	N	ARG	D	226	58.561	26.389	13.650	1.000	26.12
ATOM	7127	CA	ARG	D	226	57.502	27.349	13.938	1.000	23.63
ATOM	7128	CB	ARG	D	226	56.244	26.629	14.420	1.000	20.50
ATOM	7129	CG	ARG	D	226	56.534	25.671	15.576	1.000	19.56
ATOM	7130	CD	ARG	D	226	55.319	25.523	16.471	1.000	25.12
ATOM	7131	NE	ARG	D	226	55.428	24.429	17.437	1.000	24.67
ATOM	7132	CZ	ARG	D	226	55.846	24.588	18.692	1.000	26.53

ATOM	7133	NH1	ARG	D	226	55.915	23.545	19.508	1.000	21.62
ATOM	7134	NH2	ARG	D	226	56.198	25.789	19.128	1.000	22.97
ATOM	7135	C	ARG	D	226	57.985	28.311	15.012	1.000	25.88
ATOM	7136	O	ARG	D	226	59.002	28.034	15.650	1.000	27.19
ATOM	7137	N	LEU	D	227	57.272	29.410	15.216	1.000	22.50
ATOM	7138	CA	LEU	D	227	57.614	30.242	16.371	1.000	25.88
ATOM	7139	CB	LEU	D	227	56.803	31.533	16.326	1.000	26.52
ATOM	7140	CG	LEU	D	227	57.095	32.428	15.114	1.000	24.01
ATOM	7141	CD1	LEU	D	227	56.142	33.614	15.088	1.000	22.93
ATOM	7142	CD2	LEU	D	227	58.547	32.883	15.124	1.000	18.44
ATOM	7143	C	LEU	D	227	57.366	29.458	17.652	1.000	24.33
ATOM	7144	O	LEU	D	227	56.537	28.548	17.677	1.000	20.20
ATOM	7145	N	GLY	D	228	58.081	29.787	18.721	1.000	21.98
ATOM	7146	CA	GLY	D	228	57.837	29.125	19.996	1.000	20.07
ATOM	7147	C	GLY	D	228	56.496	29.562	20.569	1.000	20.67
ATOM	7148	O	GLY	D	228	56.058	30.683	20.327	1.000	25.18
ATOM	7149	N	ASP	D	229	55.840	28.688	21.311	1.000	21.96
ATOM	7150	CA	ASP	D	229	54.566	28.978	21.971	1.000	22.40
ATOM	7151	CB	ASP	D	229	53.751	27.696	22.030	1.000	25.51
ATOM	7152	CG	ASP	D	229	52.428	27.776	22.752	1.000	38.71
ATOM	7153	OD1	ASP	D	229	51.577	26.898	22.478	1.000	53.25
ATOM	7154	OD2	ASP	D	229	52.189	28.671	23.585	1.000	37.19
ATOM	7155	C	ASP	D	229	54.842	29.536	23.365	1.000	21.25
ATOM	7156	O	ASP	D	229	55.580	28.891	24.119	1.000	22.74
ATOM	7157	N	PRO	D	230	54.299	30.688	23.715	1.000	23.51
ATOM	7158	CD	PRO	D	230	53.440	31.547	22.877	1.000	25.76
ATOM	7159	CA	PRO	D	230	54.527	31.282	25.042	1.000	24.49
ATOM	7160	CB	PRO	D	230	53.474	32.399	25.093	1.000	24.44
ATOM	7161	CG	PRO	D	230	53.403	32.840	23.656	1.000	23.90
ATOM	7162	C	PRO	D	230	54.331	30.298	26.184	1.000	24.91
ATOM	7163	O	PRO	D	230	55.048	30.381	27.185	1.000	23.08
ATOM	7164	N	ALA	D	231	53.405	29.354	26.066	1.000	25.76
ATOM	7165	CA	ALA	D	231	53.263	28.311	27.083	1.000	25.88
ATOM	7166	CB	ALA	D	231	52.139	27.341	26.750	1.000	16.85
ATOM	7167	C	ALA	D	231	54.545	27.504	27.256	1.000	26.87
ATOM	7168	O	ALA	D	231	54.831	27.004	28.343	1.000	24.96
ATOM	7169	N	GLU	D	232	55.310	27.376	26.170	1.000	22.61
ATOM	7170	CA	GLU	D	232	56.565	26.623	26.239	1.000	22.59
ATOM	7171	CB	GLU	D	232	57.072	26.343	24.825	1.000	23.36
ATOM	7172	CG	GLU	D	232	56.259	25.290	24.103	1.000	22.39
ATOM	7173	CD	GLU	D	232	56.491	25.243	22.609	1.000	23.33
ATOM	7174	OE1	GLU	D	232	56.947	26.228	21.994	1.000	24.03
ATOM	7175	OE2	GLU	D	232	56.200	24.169	22.042	1.000	27.05
ATOM	7176	C	GLU	D	232	57.586	27.376	27.080	1.000	21.77
ATOM	7177	O	GLU	D	232	58.351	26.775	27.831	1.000	21.99
ATOM	7178	N	TYR	D	233	57.591	28.707	26.993	1.000	19.90
ATOM	7179	CA	TYR	D	233	58.405	29.480	27.927	1.000	20.05
ATOM	7180	CB	TYR	D	233	58.302	30.975	27.612	1.000	19.81
ATOM	7181	CG	TYR	D	233	59.053	31.863	28.575	1.000	21.66
ATOM	7182	CD1	TYR	D	233	60.405	32.127	28.406	1.000	17.10
ATOM	7183	CE1	TYR	D	233	61.093	32.938	29.284	1.000	17.27
ATOM	7184	CD2	TYR	D	233	58.410	32.448	29.662	1.000	20.72
ATOM	7185	CE2	TYR	D	233	59.098	33.258	30.543	1.000	21.75
ATOM	7186	CZ	TYR	D	233	60.437	33.503	30.355	1.000	19.73
ATOM	7187	OH	TYR	D	233	61.105	34.314	31.242	1.000	21.89
ATOM	7188	C	TYR	D	233	57.961	29.200	29.361	1.000	28.08
ATOM	7189	O	TYR	D	233	58.773	28.926	30.248	1.000	29.73
ATOM	7190	N	ALA	D	234	56.656	29.275	29.598	1.000	25.56
ATOM	7191	CA	ALA	D	234	56.071	29.079	30.922	1.000	19.98
ATOM	7192	CB	ALA	D	234	54.555	29.223	30.853	1.000	20.85
ATOM	7193	C	ALA	D	234	56.444	27.720	31.507	1.000	19.41

ATOM	7194	O	ALA	D	234	56.819	27.634	32.677	1.000	25.32
ATOM	7195	N	HIS	D	235	56.347	26.661	30.704	1.000	18.96
ATOM	7196	CA	HIS	D	235	56.787	25.340	31.116	1.000	19.06
ATOM	7197	CB	HIS	D	235	56.705	24.328	29.966	1.000	21.94
ATOM	7198	CG	HIS	D	235	57.338	23.000	30.265	1.000	24.66
ATOM	7199	CD2	HIS	D	235	58.590	22.520	30.052	1.000	22.51
ATOM	7200	ND1	HIS	D	235	56.639	21.962	30.849	1.000	27.58
ATOM	7201	CE1	HIS	D	235	57.430	20.914	30.994	1.000	22.15
ATOM	7202	NE2	HIS	D	235	58.625	21.232	30.516	1.000	26.23
ATOM	7203	C	HIS	D	235	58.223	25.382	31.632	1.000	25.27
ATOM	7204	O	HIS	D	235	58.518	24.777	32.666	1.000	28.14
ATOM	7205	N	LEU	D	236	59.126	26.059	30.917	1.000	22.13
ATOM	7206	CA	LEU	D	236	60.521	26.045	31.352	1.000	21.53
ATOM	7207	CB	LEU	D	236	61.454	26.669	30.313	1.000	21.08
ATOM	7208	CG	LEU	D	236	62.939	26.690	30.708	1.000	18.33
ATOM	7209	CD1	LEU	D	236	63.415	25.289	31.058	1.000	15.49
ATOM	7210	CD2	LEU	D	236	63.801	27.274	29.595	1.000	20.04
ATOM	7211	C	LEU	D	236	60.683	26.782	32.680	1.000	22.66
ATOM	7212	O	LEU	D	236	61.451	26.354	33.544	1.000	22.41
ATOM	7213	N	VAL	D	237	59.961	27.884	32.848	1.000	22.04
ATOM	7214	CA	VAL	D	237	59.983	28.619	34.110	1.000	19.35
ATOM	7215	CB	VAL	D	237	59.040	29.831	34.088	1.000	23.88
ATOM	7216	CG1	VAL	D	237	58.862	30.404	35.490	1.000	24.78
ATOM	7217	CG2	VAL	D	237	59.556	30.915	33.146	1.000	20.31
ATOM	7218	C	VAL	D	237	59.597	27.686	35.250	1.000	24.98
ATOM	7219	O	VAL	D	237	60.241	27.617	36.293	1.000	25.46
ATOM	7220	N	GLN	D	238	58.515	26.934	35.045	1.000	26.56
ATOM	7221	CA	GLN	D	238	58.071	25.992	36.061	1.000	23.40
ATOM	7222	CB	GLN	D	238	56.793	25.272	35.615	1.000	27.07
ATOM	7223	CG	GLN	D	238	56.445	24.107	36.536	1.000	35.35
ATOM	7224	CD	GLN	D	238	55.029	23.607	36.317	1.000	46.19
ATOM	7225	OE1	GLN	D	238	54.174	24.356	35.832	1.000	45.64
ATOM	7226	NE2	GLN	D	238	54.789	22.342	36.664	1.000	44.19
ATOM	7227	C	GLN	D	238	59.133	24.943	36.376	1.000	22.17
ATOM	7228	O	GLN	D	238	59.384	24.636	37.542	1.000	27.26
ATOM	7229	N	ALA	D	239	59.739	24.383	35.333	1.000	17.35
ATOM	7230	CA	ALA	D	239	60.759	23.354	35.530	1.000	17.80
ATOM	7231	CB	ALA	D	239	61.226	22.829	34.177	1.000	22.63
ATOM	7232	C	ALA	D	239	61.934	23.882	36.339	1.000	22.18
ATOM	7233	O	ALA	D	239	62.531	23.165	37.148	1.000	24.37
ATOM	7234	N	ILE	D	240	62.280	25.149	36.123	1.000	20.99
ATOM	7235	CA	ILE	D	240	63.384	25.757	36.870	1.000	25.46
ATOM	7236	CB	ILE	D	240	63.847	27.078	36.229	1.000	23.16
ATOM	7237	CG2	ILE	D	240	64.781	27.836	37.160	1.000	20.68
ATOM	7238	CG1	ILE	D	240	64.496	26.888	34.852	1.000	19.72
ATOM	7239	CD1	ILE	D	240	64.804	28.190	34.147	1.000	22.08
ATOM	7240	C	ILE	D	240	62.977	26.005	38.318	1.000	28.16
ATOM	7241	O	ILE	D	240	63.778	25.837	39.241	1.000	22.51
ATOM	7242	N	ILE	D	241	61.718	26.410	38.512	1.000	21.64
ATOM	7243	CA	ILE	D	241	61.278	26.665	39.891	1.000	28.25
ATOM	7244	CB	ILE	D	241	59.868	27.273	39.917	1.000	27.90
ATOM	7245	CG2	ILE	D	241	59.182	27.110	41.264	1.000	26.14
ATOM	7246	CG1	ILE	D	241	59.842	28.752	39.508	1.000	22.68
ATOM	7247	CD1	ILE	D	241	58.490	29.205	38.990	1.000	22.21
ATOM	7248	C	ILE	D	241	61.345	25.369	40.689	1.000	29.32
ATOM	7249	O	ILE	D	241	61.787	25.334	41.840	1.000	26.76
ATOM	7250	N	GLU	D	242	60.919	24.291	40.042	1.000	21.42
ATOM	7251	CA	GLU	D	242	60.801	22.989	40.655	1.000	23.60
ATOM	7252	CB	GLU	D	242	59.922	22.114	39.746	1.000	24.58
ATOM	7253	CG	GLU	D	242	58.454	22.521	39.744	1.000	26.39
ATOM	7254	CD	GLU	D	242	57.567	21.445	39.142	1.000	30.24

ATOM	7255	OE1	GLU	D	242	56.334	21.526	39.303	1.000	39.48
ATOM	7256	OE2	GLU	D	242	58.113	20.516	38.508	1.000	38.42
ATOM	7257	C	GLU	D	242	62.128	22.289	40.908	1.000	28.27
ATOM	7258	O	GLU	D	242	62.259	21.554	41.891	1.000	25.03
ATOM	7259	N	ASN	D	243	63.121	22.467	40.042	1.000	20.97
ATOM	7260	CA	ASN	D	243	64.362	21.711	40.207	1.000	21.86
ATOM	7261	CB	ASN	D	243	64.983	21.403	38.843	1.000	22.88
ATOM	7262	CG	ASN	D	243	66.147	20.435	38.957	1.000	22.69
ATOM	7263	OD1	ASN	D	243	67.066	20.629	39.753	1.000	23.72
ATOM	7264	ND2	ASN	D	243	66.104	19.391	38.158	1.000	18.75
ATOM	7265	C	ASN	D	243	65.360	22.460	41.078	1.000	26.32
ATOM	7266	O	ASN	D	243	65.862	23.517	40.692	1.000	24.83
ATOM	7267	N	PRO	D	244	65.642	21.918	42.259	1.000	25.17
ATOM	7268	CD	PRO	D	244	65.169	20.615	42.752	1.000	24.25
ATOM	7269	CA	PRO	D	244	66.474	22.616	43.236	1.000	21.82
ATOM	7270	CB	PRO	D	244	66.451	21.675	44.453	1.000	24.37
ATOM	7271	CG	PRO	D	244	65.267	20.792	44.243	1.000	27.61
ATOM	7272	C	PRO	D	244	67.922	22.825	42.819	1.000	20.75
ATOM	7273	O	PRO	D	244	68.605	23.663	43.408	1.000	19.99
ATOM	7274	N	PHE	D	245	68.429	22.091	41.830	1.000	23.06
ATOM	7275	CA	PHE	D	245	69.865	22.153	41.541	1.000	19.95
ATOM	7276	CB	PHE	D	245	70.400	20.720	41.389	1.000	21.93
ATOM	7277	CG	PHE	D	245	71.836	20.520	41.853	1.000	20.86
ATOM	7278	CD1	PHE	D	245	72.829	20.123	40.974	1.000	16.58
ATOM	7279	CD2	PHE	D	245	72.179	20.743	43.176	1.000	17.52
ATOM	7280	CE1	PHE	D	245	74.133	19.956	41.402	1.000	20.48
ATOM	7281	CE2	PHE	D	245	73.476	20.574	43.610	1.000	17.54
ATOM	7282	CZ	PHE	D	245	74.469	20.180	42.723	1.000	17.22
ATOM	7283	C	PHE	D	245	70.193	22.997	40.319	1.000	25.51
ATOM	7284	O	PHE	D	245	71.362	23.052	39.917	1.000	21.54
ATOM	7285	N	LEU	D	246	69.233	23.672	39.703	1.000	23.04
ATOM	7286	CA	LEU	D	246	69.482	24.581	38.593	1.000	21.38
ATOM	7287	CB	LEU	D	246	68.263	24.699	37.661	1.000	20.45
ATOM	7288	CG	LEU	D	246	68.043	23.564	36.661	1.000	24.84
ATOM	7289	CD1	LEU	D	246	66.692	23.681	35.969	1.000	21.22
ATOM	7290	CD2	LEU	D	246	69.174	23.543	35.631	1.000	21.12
ATOM	7291	C	LEU	D	246	69.832	25.969	39.114	1.000	21.29
ATOM	7292	O	LEU	D	246	68.995	26.664	39.697	1.000	21.82
ATOM	7293	N	ASN	D	247	71.059	26.414	38.900	1.000	17.26
ATOM	7294	CA	ASN	D	247	71.489	27.713	39.389	1.000	18.30
ATOM	7295	CB	ASN	D	247	71.856	27.597	40.880	1.000	23.01
ATOM	7296	CG	ASN	D	247	71.921	28.933	41.591	1.000	27.53
ATOM	7297	OD1	ASN	D	247	71.495	29.959	41.059	1.000	21.47
ATOM	7298	ND2	ASN	D	247	72.465	28.964	42.807	1.000	21.65
ATOM	7299	C	ASN	D	247	72.678	28.254	38.597	1.000	18.72
ATOM	7300	O	ASN	D	247	73.562	27.492	38.201	1.000	19.15
ATOM	7301	N	GLY	D	248	72.714	29.563	38.391	1.000	18.94
ATOM	7302	CA	GLY	D	248	73.794	30.276	37.752	1.000	19.96
ATOM	7303	C	GLY	D	248	73.964	29.984	36.278	1.000	22.95
ATOM	7304	O	GLY	D	248	75.043	30.179	35.703	1.000	20.62
ATOM	7305	N	GLU	D	249	72.902	29.517	35.635	1.000	17.77
ATOM	7306	CA	GLU	D	249	73.018	29.050	34.253	1.000	15.96
ATOM	7307	CB	GLU	D	249	72.851	27.529	34.256	1.000	17.48
ATOM	7308	CG	GLU	D	249	72.390	26.859	32.984	1.000	16.91
ATOM	7309	CD	GLU	D	249	73.427	26.784	31.889	1.000	19.08
ATOM	7310	OE1	GLU	D	249	73.463	25.784	31.143	1.000	22.69
ATOM	7311	OE2	GLU	D	249	74.224	27.732	31.777	1.000	21.40
ATOM	7312	C	GLU	D	249	72.020	29.759	33.348	1.000	22.60
ATOM	7313	O	GLU	D	249	71.012	30.307	33.796	1.000	17.66
ATOM	7314	N	VAL	D	250	72.327	29.756	32.053	1.000	19.97
ATOM	7315	CA	VAL	D	250	71.486	30.277	30.994	1.000	15.24

ATOM	7316	CB	VAL	D	250	72.245	31.284	30.115	1.000	22.54
ATOM	7317	CG1	VAL	D	250	71.343	31.787	28.994	1.000	19.92
ATOM	7318	CG2	VAL	D	250	72.767	32.445	30.941	1.000	19.32
ATOM	7319	C	VAL	D	250	70.976	29.127	30.124	1.000	19.92
ATOM	7320	O	VAL	D	250	71.768	28.270	29.725	1.000	19.42
ATOM	7321	N	ILE	D	251	69.679	29.091	29.826	1.000	16.97
ATOM	7322	CA	ILE	D	251	69.132	27.997	29.033	1.000	20.11
ATOM	7323	CB	ILE	D	251	68.074	27.197	29.821	1.000	19.46
ATOM	7324	CG2	ILE	D	251	67.514	26.093	28.930	1.000	19.68
ATOM	7325	CG1	ILE	D	251	68.593	26.668	31.158	1.000	13.76
ATOM	7326	CD1	ILE	D	251	67.692	25.683	31.850	1.000	17.14
ATOM	7327	C	ILE	D	251	68.500	28.495	27.738	1.000	18.55
ATOM	7328	O	ILE	D	251	67.578	29.312	27.763	1.000	20.22
ATOM	7329	N	ARG	D	252	69.005	27.995	26.614	1.000	21.00
ATOM	7330	CA	ARG	D	252	68.451	28.372	25.316	1.000	20.07
ATOM	7331	CB	ARG	D	252	69.442	28.127	24.185	1.000	20.58
ATOM	7332	CG	ARG	D	252	70.728	28.928	24.222	1.000	22.33
ATOM	7333	CD	ARG	D	252	71.650	28.523	23.073	1.000	21.13
ATOM	7334	NE	ARG	D	252	71.050	28.861	21.784	1.000	18.85
ATOM	7335	CZ	ARG	D	252	71.557	29.701	20.900	1.000	18.85
ATOM	7336	NH1	ARG	D	252	70.918	29.927	19.764	1.000	16.90
ATOM	7337	NH2	ARG	D	252	72.699	30.323	21.132	1.000	20.07
ATOM	7338	C	ARG	D	252	67.172	27.578	25.040	1.000	19.42
ATOM	7339	O	ARG	D	252	67.152	26.351	25.152	1.000	17.60
ATOM	7340	N	LEU	D	253	66.114	28.290	24.675	1.000	17.77
ATOM	7341	CA	LEU	D	253	64.837	27.685	24.320	1.000	17.55
ATOM	7342	CB	LEU	D	253	63.789	28.077	25.359	1.000	20.36
ATOM	7343	CG	LEU	D	253	62.383	27.489	25.190	1.000	19.52
ATOM	7344	CD1	LEU	D	253	62.424	25.980	25.318	1.000	12.98
ATOM	7345	CD2	LEU	D	253	61.427	28.098	26.216	1.000	17.81
ATOM	7346	C	LEU	D	253	64.464	28.176	22.925	1.000	22.27
ATOM	7347	O	LEU	D	253	63.866	29.242	22.798	1.000	18.37
ATOM	7348	N	ASP	D	254	64.845	27.447	21.875	1.000	17.63
ATOM	7349	CA	ASP	D	254	64.848	28.079	20.561	1.000	19.74
ATOM	7350	CB	ASP	D	254	66.170	28.856	20.403	1.000	16.22
ATOM	7351	CG	ASP	D	254	67.383	27.959	20.577	1.000	21.64
ATOM	7352	OD1	ASP	D	254	67.232	26.720	20.613	1.000	18.65
ATOM	7353	OD2	ASP	D	254	68.520	28.473	20.678	1.000	23.91
ATOM	7354	C	ASP	D	254	64.726	27.139	19.378	1.000	20.09
ATOM	7355	O	ASP	D	254	65.018	27.559	18.255	1.000	22.74
ATOM	7356	N	GLY	D	255	64.305	25.897	19.582	1.000	22.35
ATOM	7357	CA	GLY	D	255	64.101	24.976	18.468	1.000	18.23
ATOM	7358	C	GLY	D	255	65.387	24.678	17.715	1.000	23.86
ATOM	7359	O	GLY	D	255	65.338	24.219	16.567	1.000	21.75
ATOM	7360	N	ALA	D	256	66.502	24.941	18.375	1.000	19.53
ATOM	7361	CA	ALA	D	256	67.855	24.721	17.891	1.000	20.22
ATOM	7362	CB	ALA	D	256	67.986	23.287	17.391	1.000	19.78
ATOM	7363	C	ALA	D	256	68.267	25.702	16.802	1.000	22.63
ATOM	7364	O	ALA	D	256	69.219	25.455	16.056	1.000	21.69
ATOM	7365	N	ILE	D	257	67.569	26.833	16.682	1.000	19.23
ATOM	7366	CA	ILE	D	257	67.982	27.829	15.698	1.000	16.07
ATOM	7367	CB	ILE	D	257	66.915	28.924	15.518	1.000	18.79
ATOM	7368	CG2	ILE	D	257	66.903	29.894	16.692	1.000	22.52
ATOM	7369	CG1	ILE	D	257	67.039	29.710	14.207	1.000	16.43
ATOM	7370	CD1	ILE	D	257	65.990	30.785	14.047	1.000	16.38
ATOM	7371	C	ILE	D	257	69.300	28.484	16.102	1.000	25.38
ATOM	7372	O	ILE	D	257	69.626	28.535	17.284	1.000	21.27
ATOM	7373	N	ARG	D	258	70.040	28.974	15.122	1.000	21.25
ATOM	7374	CA	ARG	D	258	71.191	29.848	15.281	1.000	17.34
ATOM	7375	CB	ARG	D	258	72.497	29.119	14.962	1.000	18.94
ATOM	7376	CG	ARG	D	258	72.797	27.932	15.880	1.000	17.46

ATOM	7377	CD	ARG	D	258	72.975	28.415	17.307	1.000	22.03
ATOM	7378	NE	ARG	D	258	73.280	27.368	18.263	1.000	22.14
ATOM	7379	CZ	ARG	D	258	72.412	26.609	18.913	1.000	24.72
ATOM	7380	NH1	ARG	D	258	72.883	25.698	19.764	1.000	20.30
ATOM	7381	NH2	ARG	D	258	71.104	26.745	18.728	1.000	19.58
ATOM	7382	C	ARG	D	258	70.997	31.053	14.369	1.000	23.77
ATOM	7383	O	ARG	D	258	70.781	30.903	13.156	1.000	24.03
ATOM	7384	N	MET	D	259	71.039	32.278	14.888	1.000	21.77
ATOM	7385	CA	MET	D	259	70.662	33.390	14.014	1.000	25.38
ATOM	7386	CB	MET	D	259	70.191	34.592	14.839	1.000	24.28
ATOM	7387	CG	MET	D	259	69.122	34.266	15.865	1.000	23.82
ATOM	7388	SD	MET	D	259	67.734	33.346	15.167	1.000	28.80
ATOM	7389	CE	MET	D	259	66.976	34.600	14.133	1.000	26.61
ATOM	7390	C	MET	D	259	71.794	33.830	13.091	1.000	30.90
ATOM	7391	O	MET	D	259	72.937	34.018	13.496	1.000	30.51
ATOM	7392	N	GLN	D	260	71.450	34.025	11.828	1.000	30.38
ATOM	7393	CA	GLN	D	260	72.343	34.553	10.806	1.000	25.30
ATOM	7394	CB	GLN	D	260	71.913	33.950	9.466	1.000	30.57
ATOM	7395	CG	GLN	D	260	72.719	32.746	9.023	1.000	43.46
ATOM	7396	CD	GLN	D	260	74.004	32.515	9.785	1.000	50.86
ATOM	7397	OE1	GLN	D	260	75.109	32.788	9.311	1.000	41.52
ATOM	7398	NE2	GLN	D	260	73.899	32.001	11.006	1.000	68.66
ATOM	7399	C	GLN	D	260	72.308	36.073	10.795	1.000	24.41
ATOM	7400	O	GLN	D	260	71.451	36.657	11.475	1.000	20.57
ATOM	7401	N	PRO	D	261	73.191	36.756	10.080	1.000	24.38
ATOM	7402	CD	PRO	D	261	74.281	36.227	9.234	1.000	26.73
ATOM	7403	CA	PRO	D	261	73.183	38.228	10.080	1.000	22.57
ATOM	7404	CB	PRO	D	261	74.205	38.582	8.992	1.000	23.87
ATOM	7405	CG	PRO	D	261	75.174	37.436	9.068	1.000	25.59
ATOM	7406	C	PRO	D	261	71.814	38.793	9.723	1.000	25.02
ATOM	7407	OT1	PRO	D	261	71.101	38.072	9.000	1.000	27.55
ATOM	7408	OT2	PRO	D	261	71.488	39.902	10.183	1.000	22.37
ATOM	7409	PN	LIG	D	262	57.422	39.435	25.068	1.000	23.15
ATOM	7410	O1N	LIG	D	262	57.806	38.514	23.885	1.000	25.67
ATOM	7411	O2N	LIG	D	262	56.360	38.756	25.925	1.000	26.40
ATOM	7412	O3P	LIG	D	262	56.913	40.769	24.463	1.000	23.02
ATOM	7413	O5M	LIG	D	262	58.744	39.749	25.910	1.000	24.23
ATOM	7414	C5M	LIG	D	262	59.075	39.020	27.127	1.000	18.88
ATOM	7415	C4M	LIG	D	262	60.636	38.980	27.309	1.000	18.29
ATOM	7416	O4M	LIG	D	262	61.167	38.014	26.391	1.000	22.02
ATOM	7417	C3M	LIG	D	262	61.315	40.324	26.955	1.000	18.81
ATOM	7418	O3M	LIG	D	262	62.389	40.543	27.900	1.000	22.74
ATOM	7419	C2M	LIG	D	262	61.878	40.076	25.532	1.000	14.35
ATOM	7420	O2M	LIG	D	262	62.962	41.002	25.316	1.000	20.42
ATOM	7421	C1M	LIG	D	262	62.259	38.591	25.613	1.000	20.56
ATOM	7422	N1N	LIG	D	262	62.462	37.840	24.339	1.000	22.42
ATOM	7423	C6N	LIG	D	262	63.798	37.319	24.034	1.000	25.78
ATOM	7424	C5N	LIG	D	262	64.040	36.661	22.882	1.000	26.30
ATOM	7425	C4N	LIG	D	262	62.985	36.644	21.748	1.000	26.65
ATOM	7426	C3N	LIG	D	262	61.541	36.889	22.299	1.000	22.98
ATOM	7427	C2N	LIG	D	262	61.342	37.606	23.421	1.000	23.56
ATOM	7428	C7N	LIG	D	262	60.403	36.620	21.333	1.000	20.05
ATOM	7429	O7N	LIG	D	262	60.607	36.003	20.279	1.000	22.45
ATOM	7430	N7N	LIG	D	262	59.213	37.076	21.680	1.000	14.14
ATOM	7431	PA	LIG	D	262	55.631	41.515	24.912	1.000	26.46
ATOM	7432	O1A	LIG	D	262	55.631	42.919	24.316	1.000	24.54
ATOM	7433	O2A	LIG	D	262	54.364	40.750	24.508	1.000	29.61
ATOM	7434	O5B	LIG	D	262	55.637	41.666	26.507	1.000	26.93
ATOM	7435	C5B	LIG	D	262	56.576	42.588	27.145	1.000	20.55
ATOM	7436	C4B	LIG	D	262	55.898	43.240	28.393	1.000	23.80
ATOM	7437	O4B	LIG	D	262	56.880	44.008	29.138	1.000	21.67

ATOM	7438	C3B	LIG	D	262	54.724	44.179	27.988	1.000	24.11
ATOM	7439	O3B	LIG	D	262	53.525	43.815	28.694	1.000	22.60
ATOM	7440	C2B	LIG	D	262	55.237	45.558	28.426	1.000	28.11
ATOM	7441	O2B	LIG	D	262	54.192	46.481	28.755	1.000	27.28
ATOM	7442	C1B	LIG	D	262	56.225	45.221	29.568	1.000	19.96
ATOM	7443	N9A	LIG	D	262	57.210	46.336	29.738	1.000	22.28
ATOM	7444	C4A	LIG	D	262	57.558	46.962	30.940	1.000	20.80
ATOM	7445	N3A	LIG	D	262	57.133	46.764	32.324	1.000	19.84
ATOM	7446	C2A	LIG	D	262	57.705	47.570	33.190	1.000	15.71
ATOM	7447	N1A	LIG	D	262	58.594	48.507	32.971	1.000	24.24
ATOM	7448	C6A	LIG	D	262	59.043	48.762	31.754	1.000	20.94
ATOM	7449	C5A	LIG	D	262	58.541	47.990	30.639	1.000	23.41
ATOM	7450	N7A	LIG	D	262	58.836	48.041	29.278	1.000	30.14
ATOM	7451	C8A	LIG	D	262	58.005	47.040	28.846	1.000	21.02
ATOM	7452	N6A	LIG	D	262	59.761	49.860	31.547	1.000	18.74
ATOM	7453	C	LIG	D	262	63.468	42.004	16.293	1.000	37.19
ATOM	7454	C1	LIG	D	262	64.908	42.400	15.731	1.000	40.91
ATOM	7455	N	LIG	D	262	65.122	42.614	14.374	1.000	46.58
ATOM	7456	O	LIG	D	262	65.816	42.505	16.583	1.000	32.75
ATOM	7457	C2	LIG	D	262	63.981	42.485	13.406	1.000	51.55
ATOM	7458	C3	LIG	D	262	63.916	41.176	12.560	1.000	55.49
ATOM	7459	C4	LIG	D	262	66.506	42.952	13.906	1.000	38.70
ATOM	7460	C5	LIG	D	262	67.250	41.676	13.422	1.000	39.77
ATOM	7461	C6	LIG	D	262	66.495	40.887	12.339	1.000	43.74
ATOM	7462	C7	LIG	D	262	65.145	40.259	12.747	1.000	52.09
ATOM	7463	C8	LIG	D	262	62.498	43.226	16.479	1.000	26.51
ATOM	7464	C9	LIG	D	262	61.135	42.962	16.665	1.000	35.63
ATOM	7465	C10	LIG	D	262	60.228	44.006	16.841	1.000	32.64
ATOM	7466	C11	LIG	D	262	60.671	45.323	16.828	1.000	28.46
ATOM	7467	C12	LIG	D	262	62.026	45.594	16.657	1.000	31.49
ATOM	7468	C13	LIG	D	262	62.930	44.554	16.461	1.000	24.95
ATOM	7469	C15	LIG	D	262	63.762	41.769	18.722	1.000	32.41
ATOM	7470	N1	LIG	D	262	63.815	41.274	19.918	1.000	31.72
ATOM	7471	C16	LIG	D	262	63.550	39.860	20.066	1.000	31.24
ATOM	7472	C17	LIG	D	262	63.243	39.052	18.946	1.000	27.85
ATOM	7473	C18	LIG	D	262	63.219	39.705	17.545	1.000	34.74
ATOM	7474	N2	LIG	D	262	63.493	41.175	17.586	1.000	39.88
ATOM	7475	S	LIG	D	262	62.871	38.731	16.107	1.000	32.53
ATOM	7476	C19	LIG	D	262	63.019	37.761	19.346	1.000	27.53
ATOM	7477	N3	LIG	D	262	63.217	37.741	20.731	1.000	33.77
ATOM	7478	N4	LIG	D	262	63.516	39.014	21.153	1.000	30.88
ATOM	7479	O	HOH		301	92.776	12.297	31.743	1.000	20.14
ATOM	7480	O	HOH		302	77.559	34.144	9.282	1.000	20.43
ATOM	7481	O	HOH		303	80.425	29.345	40.907	1.000	16.20
ATOM	7482	O	HOH		304	91.952	31.264	29.002	1.000	16.74
ATOM	7483	O	HOH		305	94.801	36.551	34.544	1.000	22.14
ATOM	7484	O	HOH		306	65.211	42.139	29.804	1.000	22.38
ATOM	7485	O	HOH		307	100.866	4.606	25.942	1.000	22.10
ATOM	7486	O	HOH		308	70.380	25.625	13.725	1.000	25.15
ATOM	7487	O	HOH		309	98.836	38.721	8.048	1.000	20.62
ATOM	7488	O	HOH		310	73.571	6.226	35.060	1.000	32.14
ATOM	7489	O	HOH		311	88.880	24.223	27.409	1.000	20.29
ATOM	7490	O	HOH		312	72.760	24.489	37.007	1.000	18.84
ATOM	7491	O	HOH		313	94.756	19.229	14.119	1.000	26.27
ATOM	7492	O	HOH		314	87.327	22.157	29.706	1.000	16.82
ATOM	7493	O	HOH		315	63.431	29.981	17.877	1.000	23.03
ATOM	7494	O	HOH		316	84.014	35.114	15.138	1.000	20.55
ATOM	7495	O	HOH		317	87.485	35.486	13.797	1.000	25.53
ATOM	7496	O	HOH		318	83.964	52.541	27.664	1.000	18.55
ATOM	7497	O	HOH		319	77.741	41.945	42.922	1.000	16.89
ATOM	7498	O	HOH		320	93.152	52.197	29.838	1.000	24.83

ATOM	7499	O	HOH	321	97.176	7.390	32.191	1.000	25.52
ATOM	7500	O	HOH	322	77.957	35.854	11.120	1.000	18.59
ATOM	7501	O	HOH	323	85.629	53.769	25.435	1.000	18.98
ATOM	7502	O	HOH	324	86.538	32.202	24.492	1.000	40.93
ATOM	7503	O	HOH	325	87.007	49.918	27.784	1.000	27.18
ATOM	7504	O	HOH	326	77.600	20.706	41.125	1.000	21.42
ATOM	7505	O	HOH	327	78.902	55.159	40.598	1.000	42.52
ATOM	7506	O	HOH	328	81.133	17.266	35.954	1.000	23.52
ATOM	7507	O	HOH	329	113.031	19.892	24.590	1.000	29.70
ATOM	7508	O	HOH	330	104.459	32.288	29.421	1.000	22.61
ATOM	7509	O	HOH	331	78.966	10.036	27.642	1.000	28.79
ATOM	7510	O	HOH	332	82.521	27.789	41.932	1.000	24.45
ATOM	7511	O	HOH	333	78.816	22.190	17.044	1.000	21.49
ATOM	7512	O	HOH	334	90.214	12.158	32.342	1.000	19.15
ATOM	7513	O	HOH	335	75.406	27.047	28.515	1.000	46.66
ATOM	7514	O	HOH	336	67.009	36.757	18.236	1.000	29.57
ATOM	7515	O	HOH	337	88.708	40.365	34.712	1.000	20.85
ATOM	7516	O	HOH	338	61.508	16.582	41.397	1.000	29.21
ATOM	7517	O	HOH	339	79.952	36.047	34.651	1.000	22.65
ATOM	7518	O	HOH	340	69.698	25.567	20.952	1.000	20.27
ATOM	7519	O	HOH	341	78.040	6.743	26.436	1.000	16.46
ATOM	7520	O	HOH	342	112.979	15.545	31.632	1.000	32.19
ATOM	7521	O	HOH	343	76.376	14.721	10.758	1.000	27.36
ATOM	7522	O	HOH	344	69.396	52.971	44.875	1.000	19.26
ATOM	7523	O	HOH	345	94.466	33.698	27.831	1.000	18.87
ATOM	7524	O	HOH	346	62.211	43.111	34.699	1.000	18.14
ATOM	7525	O	HOH	347	79.228	32.834	46.344	1.000	25.33
ATOM	7526	O	HOH	348	91.707	29.243	37.874	1.000	22.18
ATOM	7527	O	HOH	349	95.704	15.420	15.073	1.000	24.76
ATOM	7528	O	HOH	350	63.929	53.848	21.940	1.000	39.40
ATOM	7529	O	HOH	351	80.675	45.514	39.966	1.000	17.96
ATOM	7530	O	HOH	352	78.369	45.158	41.405	1.000	23.26
ATOM	7531	O	HOH	353	55.124	29.871	13.566	1.000	26.74
ATOM	7532	O	HOH	354	85.117	31.485	28.658	1.000	32.69
ATOM	7533	O	HOH	355	75.734	38.342	20.028	1.000	24.32
ATOM	7534	O	HOH	356	74.602	22.606	21.931	1.000	23.88
ATOM	7535	O	HOH	357	81.874	37.548	19.721	1.000	17.64
ATOM	7536	O	HOH	358	63.070	49.539	15.889	1.000	30.23
ATOM	7537	O	HOH	359	98.248	16.502	15.469	1.000	17.16
ATOM	7538	O	HOH	360	76.327	11.060	26.671	1.000	24.63
ATOM	7539	O	HOH	361	74.997	29.485	22.470	1.000	39.59
ATOM	7540	O	HOH	362	104.920	40.576	24.671	1.000	31.70
ATOM	7541	O	HOH	363	79.230	38.710	20.312	1.000	29.49
ATOM	7542	O	HOH	364	99.247	52.723	33.905	1.000	35.67
ATOM	7543	O	HOH	365	63.759	24.391	44.403	1.000	34.65
ATOM	7544	O	HOH	366	48.099	14.793	14.578	1.000	36.68
ATOM	7545	O	HOH	367	55.097	3.198	34.387	1.000	37.64
ATOM	7546	O	HOH	368	66.645	44.792	48.647	1.000	31.11
ATOM	7547	O	HOH	369	78.813	0.682	11.091	1.000	25.32
ATOM	7548	O	HOH	370	116.182	20.584	26.457	1.000	42.78
ATOM	7549	O	HOH	371	72.392	60.443	19.265	1.000	27.98
ATOM	7550	O	HOH	372	85.512	19.921	35.425	1.000	26.77
ATOM	7551	O	HOH	373	75.463	31.905	33.759	1.000	30.07
ATOM	7552	O	HOH	374	79.323	7.223	7.370	1.000	25.70
ATOM	7553	O	HOH	375	82.491	27.441	44.754	1.000	27.05
ATOM	7554	O	HOH	376	86.109	27.617	30.944	1.000	27.46
ATOM	7555	O	HOH	377	43.566	47.081	32.187	1.000	16.13
ATOM	7556	O	HOH	378	103.241	48.462	25.650	1.000	24.71
ATOM	7557	O	HOH	379	69.968	37.248	17.438	1.000	23.41
ATOM	7558	O	HOH	380	89.350	26.980	26.742	1.000	20.25
ATOM	7559	O	HOH	381	51.634	43.602	24.654	1.000	30.52

ATOM	7560	O	HOH	382	114.006	8.766	15.300	1.000	24.65
ATOM	7561	O	HOH	383	84.217	48.991	29.017	1.000	31.07
ATOM	7562	O	HOH	384	91.931	27.844	35.321	1.000	17.17
ATOM	7563	O	HOH	385	85.192	48.196	25.874	1.000	29.60
ATOM	7564	O	HOH	386	115.322	21.322	4.709	1.000	20.42
ATOM	7565	O	HOH	387	66.453	24.956	22.897	1.000	29.29
ATOM	7566	O	HOH	388	56.086	39.303	28.854	1.000	22.55
ATOM	7567	O	HOH	389	79.289	8.651	45.437	1.000	42.77
ATOM	7568	O	HOH	390	76.016	49.742	45.810	1.000	27.62
ATOM	7569	O	HOH	391	69.096	54.578	16.314	1.000	19.36
ATOM	7570	O	HOH	392	79.524	40.851	4.029	1.000	35.85
ATOM	7571	O	HOH	393	97.800	21.307	7.889	1.000	18.96
ATOM	7572	O	HOH	394	60.387	3.283	17.265	1.000	39.16
ATOM	7573	O	HOH	395	70.626	54.803	43.647	1.000	26.49
ATOM	7574	O	HOH	396	82.133	24.094	23.840	1.000	32.45
ATOM	7575	O	HOH	397	79.984	13.271	10.506	1.000	31.95
ATOM	7576	O	HOH	398	69.755	27.539	12.357	1.000	19.92
ATOM	7577	O	HOH	399	54.427	53.254	36.600	1.000	31.14
ATOM	7578	O	HOH	400	76.245	41.299	7.666	1.000	32.49
ATOM	7579	O	HOH	401	102.361	4.194	11.337	1.000	32.26
ATOM	7580	O	HOH	402	65.368	39.607	32.062	1.000	18.45
ATOM	7581	O	HOH	403	77.627	33.285	17.947	1.000	32.18
ATOM	7582	O	HOH	404	84.225	68.543	24.460	1.000	30.38
ATOM	7583	O	HOH	405	106.651	33.242	30.436	1.000	26.95
ATOM	7584	O	HOH	406	75.077	45.385	49.011	1.000	29.52
ATOM	7585	O	HOH	407	79.455	27.085	30.595	1.000	46.96
ATOM	7586	O	HOH	408	51.139	29.211	29.538	1.000	21.79
ATOM	7587	O	HOH	409	64.552	55.161	40.457	1.000	29.93
ATOM	7588	O	HOH	410	107.550	27.293	35.489	1.000	30.38
ATOM	7589	O	HOH	411	53.653	44.875	20.990	1.000	42.39
ATOM	7590	O	HOH	412	68.940	50.613	10.578	1.000	33.53
ATOM	7591	O	HOH	413	77.823	37.269	27.398	1.000	52.66
ATOM	7592	O	HOH	414	88.020	33.385	-1.498	1.000	23.87
ATOM	7593	O	HOH	415	73.543	9.125	6.557	1.000	37.72
ATOM	7594	O	HOH	416	58.879	47.725	48.958	1.000	29.83
ATOM	7595	O	HOH	417	76.336	65.330	23.962	1.000	22.36
ATOM	7596	O	HOH	418	52.443	49.100	42.295	1.000	24.67
ATOM	7597	O	HOH	419	70.535	6.347	41.406	1.000	27.74
ATOM	7598	O	HOH	420	88.288	67.546	11.973	1.000	30.11
ATOM	7599	O	HOH	421	69.212	56.275	41.596	1.000	32.93
ATOM	7600	O	HOH	422	64.777	-7.683	32.662	1.000	39.39
ATOM	7601	O	HOH	423	85.507	37.769	37.127	1.000	26.18
ATOM	7602	O	HOH	424	60.769	-5.497	35.178	1.000	35.95
ATOM	7603	O	HOH	425	76.724	9.020	28.963	1.000	26.73
ATOM	7604	O	HOH	426	88.772	58.307	9.168	1.000	35.00
ATOM	7605	O	HOH	427	92.867	17.963	14.820	1.000	24.96
ATOM	7606	O	HOH	428	46.765	52.287	25.746	1.000	31.05
ATOM	7607	O	HOH	429	84.460	45.572	38.946	1.000	32.72
ATOM	7608	O	HOH	430	75.187	5.894	25.803	1.000	23.00
ATOM	7609	O	HOH	431	59.372	37.396	51.274	1.000	25.28
ATOM	7610	O	HOH	432	90.348	42.583	7.062	1.000	24.06
ATOM	7611	O	HOH	433	59.054	18.728	19.491	1.000	26.20
ATOM	7612	O	HOH	434	87.471	8.190	6.913	1.000	38.33
ATOM	7613	O	HOH	435	57.945	16.732	23.289	1.000	40.80
ATOM	7614	O	HOH	436	63.529	44.279	32.431	1.000	19.37
ATOM	7615	O	HOH	437	101.843	39.707	39.930	1.000	28.87
ATOM	7616	O	HOH	438	64.407	24.039	48.731	1.000	37.91
ATOM	7617	O	HOH	439	88.442	7.691	52.002	1.000	42.77
ATOM	7618	O	HOH	440	72.465	31.064	44.572	1.000	21.67
ATOM	7619	O	HOH	441	68.994	41.346	10.123	1.000	42.94
ATOM	7620	O	HOH	442	79.097	44.850	49.113	1.000	29.22

ATOM	7621	O	HOH	443	54.574	41.823	5.022	1.000	43.31
ATOM	7622	O	HOH	444	62.894	40.739	30.750	1.000	27.05
ATOM	7623	O	HOH	445	87.850	39.681	37.054	1.000	29.04
ATOM	7624	O	HOH	446	102.935	6.383	30.051	1.000	26.13
ATOM	7625	O	HOH	447	81.399	0.725	10.978	1.000	31.16
ATOM	7626	O	HOH	448	75.791	2.055	7.947	1.000	36.53
ATOM	7627	O	HOH	449	70.507	48.423	17.926	1.000	20.58
ATOM	7628	O	HOH	450	105.650	12.383	27.890	1.000	26.46
ATOM	7629	O	HOH	451	82.895	43.409	9.910	1.000	20.55
ATOM	7630	O	HOH	452	110.272	15.926	31.003	1.000	26.86
ATOM	7631	O	HOH	453	68.815	46.589	18.947	1.000	21.05
ATOM	7632	O	HOH	454	76.594	34.173	33.922	1.000	26.38
ATOM	7633	O	HOH	455	54.072	46.868	24.653	1.000	30.30
ATOM	7634	O	HOH	456	91.069	42.715	4.402	1.000	27.91
ATOM	7635	O	HOH	457	81.997	14.819	10.048	1.000	20.02
ATOM	7636	O	HOH	458	67.486	23.662	48.188	1.000	22.81
ATOM	7637	O	HOH	459	52.296	49.095	47.652	1.000	25.11
ATOM	7638	O	HOH	460	75.602	26.828	36.321	1.000	24.34
ATOM	7639	O	HOH	461	77.276	34.990	6.677	1.000	21.15
ATOM	7640	O	HOH	462	58.803	46.498	21.948	1.000	46.48
ATOM	7641	O	HOH	463	65.913	54.952	36.668	1.000	45.96
ATOM	7642	O	HOH	464	86.907	10.226	56.341	1.000	49.82
ATOM	7643	O	HOH	465	75.050	24.660	23.343	1.000	30.62
ATOM	7644	O	HOH	466	85.073	24.898	42.520	1.000	33.55
ATOM	7645	O	HOH	467	100.013	26.261	2.735	1.000	25.57
ATOM	7646	O	HOH	468	102.785	31.581	6.162	1.000	30.61
ATOM	7647	O	HOH	469	89.302	53.313	35.809	1.000	30.13
ATOM	7648	O	HOH	470	99.425	16.286	2.376	1.000	26.49
ATOM	7649	O	HOH	471	54.696	54.570	33.861	1.000	24.27
ATOM	7650	O	HOH	472	66.678	17.442	45.628	1.000	36.63
ATOM	7651	O	HOH	473	88.323	39.792	39.649	1.000	29.12
ATOM	7652	O	HOH	474	75.968	30.164	31.264	1.000	23.90
ATOM	7653	O	HOH	475	76.155	27.321	18.568	1.000	38.98
ATOM	7654	O	HOH	476	101.777	17.659	38.545	1.000	38.91
ATOM	7655	O	HOH	477	54.564	21.181	19.102	1.000	36.10
ATOM	7656	O	HOH	478	85.523	31.838	7.876	1.000	22.22
ATOM	7657	O	HOH	479	100.112	10.630	34.314	1.000	37.69
ATOM	7658	O	HOH	480	82.501	35.202	20.962	1.000	25.05
ATOM	7659	O	HOH	481	102.572	64.683	21.745	1.000	26.48
ATOM	7660	O	HOH	482	73.557	38.100	49.865	1.000	32.24
ATOM	7661	O	HOH	483	114.148	7.806	13.007	1.000	26.89
ATOM	7662	O	HOH	484	44.492	43.400	40.299	1.000	32.81
ATOM	7663	O	HOH	485	74.717	60.776	16.043	1.000	33.98
ATOM	7664	O	HOH	486	78.365	30.500	32.549	1.000	39.62
ATOM	7665	O	HOH	487	115.947	27.013	6.468	1.000	35.66
ATOM	7666	O	HOH	488	102.897	41.478	35.832	1.000	37.34
ATOM	7667	O	HOH	489	84.341	57.813	34.619	1.000	29.69
ATOM	7668	O	HOH	490	100.125	3.494	19.130	1.000	26.61
ATOM	7669	O	HOH	491	50.809	20.138	18.682	1.000	52.18
ATOM	7670	O	HOH	492	86.185	28.643	28.091	1.000	42.40
ATOM	7671	O	HOH	493	99.822	58.547	9.222	1.000	35.54
ATOM	7672	O	HOH	494	78.317	33.116	28.899	1.000	33.46
ATOM	7673	O	HOH	495	83.739	18.024	36.847	1.000	33.56
ATOM	7674	O	HOH	496	75.125	59.664	10.426	1.000	32.84
ATOM	7675	O	HOH	497	76.115	31.609	28.684	1.000	24.76
ATOM	7676	O	HOH	498	77.499	24.626	24.992	1.000	24.37
ATOM	7677	O	HOH	499	92.431	54.586	37.374	1.000	32.36
ATOM	7678	O	HOH	500	67.858	50.628	47.734	1.000	30.18
ATOM	7679	O	HOH	501	98.318	1.761	23.333	1.000	30.71
ATOM	7680	O	HOH	502	72.986	15.557	47.384	1.000	34.73
ATOM	7681	O	HOH	503	68.995	54.791	36.757	1.000	31.47

ATOM	7682	O	HOH	504	101.723	41.946	18.346	1.000	30.00
ATOM	7683	O	HOH	505	82.264	34.952	23.539	1.000	25.17
ATOM	7684	O	HOH	506	56.697	47.408	25.618	1.000	31.14
ATOM	7685	O	HOH	507	87.847	28.731	25.957	1.000	28.11
ATOM	7686	O	HOH	508	95.244	10.416	8.064	1.000	32.16
ATOM	7687	O	HOH	509	56.627	19.004	18.253	1.000	26.24
ATOM	7688	O	HOH	510	57.854	45.037	24.642	1.000	36.65
ATOM	7689	O	HOH	511	78.741	32.690	33.128	1.000	29.92
ATOM	7690	O	HOH	512	104.124	6.696	9.404	1.000	27.70
ATOM	7691	O	HOH	513	116.359	9.727	16.189	1.000	34.95
ATOM	7692	O	HOH	514	49.109	30.125	27.987	1.000	33.92
ATOM	7693	O	HOH	515	73.757	37.904	52.165	1.000	34.57
ATOM	7694	O	HOH	516	83.597	64.886	14.692	1.000	36.49
ATOM	7695	O	HOH	517	55.248	17.298	19.521	1.000	37.21
ATOM	7696	O	HOH	518	54.874	22.157	16.029	1.000	45.14
ATOM	7697	O	HOH	519	66.187	58.150	19.372	1.000	42.85
ATOM	7698	O	HOH	520	72.069	57.310	32.850	1.000	29.22
ATOM	7699	O	HOH	521	99.114	18.960	37.026	1.000	33.10
ATOM	7700	O	HOH	522	59.194	14.762	9.954	1.000	51.08
ATOM	7701	O	HOH	523	96.552	27.459	39.703	1.000	47.86
ATOM	7702	O	HOH	524	67.085	25.696	9.189	1.000	47.80
ATOM	7703	O	HOH	525	101.022	43.581	7.126	1.000	37.40
ATOM	7704	O	HOH	526	78.966	23.519	21.132	1.000	27.15
ATOM	7705	O	HOH	527	96.487	2.281	30.380	1.000	32.71
ATOM	7706	O	HOH	528	84.740	37.917	45.393	1.000	28.40
ATOM	7707	O	HOH	529	98.413	2.783	25.894	1.000	39.61
ATOM	7708	O	HOH	530	82.799	55.750	1.882	1.000	43.02
ATOM	7709	O	HOH	531	96.924	23.856	37.478	1.000	29.70
ATOM	7710	O	HOH	532	105.207	57.177	15.684	1.000	33.51
ATOM	7711	O	HOH	533	50.454	48.206	49.545	1.000	47.69
ATOM	7712	O	HOH	534	104.933	47.130	24.713	1.000	40.72
ATOM	7713	O	HOH	535	110.866	10.401	21.494	1.000	37.91
ATOM	7714	O	HOH	536	92.838	24.232	42.078	1.000	41.89
ATOM	7715	O	HOH	537	67.555	24.966	46.015	1.000	29.13
ATOM	7716	O	HOH	538	78.053	36.477	22.849	1.000	47.09
ATOM	7717	O	HOH	539	112.925	12.201	22.087	1.000	37.50
ATOM	7718	O	HOH	540	50.757	35.007	25.917	1.000	33.90
ATOM	7719	O	HOH	541	68.640	-1.430	15.611	1.000	48.67
ATOM	7720	O	HOH	542	51.543	45.251	27.533	1.000	26.17
ATOM	7721	O	HOH	543	58.896	50.709	28.085	1.000	37.22
ATOM	7722	O	HOH	544	84.790	47.138	1.717	1.000	32.58
ATOM	7723	O	HOH	545	49.348	51.235	50.952	1.000	61.64
ATOM	7724	O	HOH	546	85.811	28.025	23.962	1.000	29.92
ATOM	7725	O	HOH	547	57.308	49.674	25.259	1.000	41.81
ATOM	7726	O	HOH	548	76.408	21.933	19.985	1.000	32.05
ATOM	7727	O	HOH	549	49.802	38.458	25.007	1.000	23.83
ATOM	7728	O	HOH	550	53.861	44.618	23.701	1.000	27.79
ATOM	7729	O	HOH	551	102.428	18.900	34.815	1.000	32.12
ATOM	7730	O	HOH	552	78.711	57.445	12.607	1.000	32.79
ATOM	7731	O	HOH	553	99.312	7.498	33.442	1.000	43.12
ATOM	7732	O	HOH	554	98.312	66.410	31.867	1.000	58.37
ATOM	7733	O	HOH	555	92.039	18.350	40.142	1.000	41.97
ATOM	7734	O	HOH	556	79.528	25.044	23.137	1.000	39.55
ATOM	7735	O	HOH	557	93.544	44.872	5.133	1.000	33.79
ATOM	7736	O	HOH	558	89.336	10.465	52.529	1.000	55.29
ATOM	7737	O	HOH	559	83.570	4.908	36.103	1.000	31.60
ATOM	7738	O	HOH	560	90.408	2.929	31.118	1.000	47.04
ATOM	7739	O	HOH	561	70.523	60.411	20.819	1.000	29.91
ATOM	7740	O	HOH	562	64.140	9.753	40.136	1.000	33.59
ATOM	7741	O	HOH	563	78.895	34.022	31.118	1.000	41.66
ATOM	7742	O	HOH	564	95.467	56.193	35.984	1.000	31.97

ATOM	7743	O	HOH	565	59.692	29.845	54.331	1.000	57.27
ATOM	7744	O	HOH	566	80.239	-2.789	16.441	1.000	63.02
ATOM	7745	O	HOH	567	65.591	55.864	34.198	1.000	42.97
ATOM	7746	O	HOH	568	74.992	59.983	27.745	1.000	27.69
ATOM	7747	O	HOH	569	86.483	67.882	25.098	1.000	31.30
ATOM	7748	O	HOH	570	115.448	11.042	22.216	1.000	43.17
ATOM	7749	O	HOH	571	60.226	17.619	34.965	1.000	35.98
ATOM	7750	O	HOH	572	54.360	30.727	49.850	1.000	32.70
ATOM	7751	O	HOH	573	79.679	2.761	38.548	1.000	28.97
ATOM	7752	O	HOH	574	84.928	67.660	11.745	1.000	44.86
ATOM	7753	O	HOH	575	42.718	39.055	40.104	1.000	25.99
ATOM	7754	O	HOH	576	83.908	26.100	25.540	1.000	36.04
ATOM	7755	O	HOH	577	79.031	30.325	46.969	1.000	47.65
ATOM	7756	O	HOH	578	75.839	21.026	5.657	1.000	33.97
ATOM	7757	O	HOH	579	65.299	-7.114	42.215	1.000	34.12
ATOM	7758	O	HOH	580	94.282	20.055	16.879	1.000	32.93
ATOM	7759	O	HOH	581	80.726	4.373	35.442	1.000	33.52
ATOM	7760	O	HOH	582	58.177	44.900	50.843	1.000	39.41

All data collection was carried out on an MAR Research (Hamburg, Germany) 345-mm image plate system installed on a Rigaku RU-200B rotating anode x-ray generator equipped with Osmic mirrors (Osmic, Inc., Troy, Michigan) and using an X-stream cryogenic system (obtained from Molecular Structure Corporation, The Woodlands, Texas). Data from 0.5° oscillations were integrated and scaled using DENZO and SCALEPACK (Otwinowski et al., *Methods Enzymol*ogy, Vol. 276, pp. 307-326 (1997)). Crystals were mounted in a fiber loop, dipped in mother liquor with 25% glycerol added, and flash-cooled in liquid nitrogen for data collection at 100° K. An initial data set was collected to 2.4 Å resolution, which was used to obtain a molecular replacement solution. The space group was identified as C2, with an ERAB or HADH2 tetramer in the asymmetric unit.

The structure was determined by molecular replacement using the program EPMR (Kissinger et al., *Acta Crystallography*, Vol. D55, pp. 484-491 (1999)) with the wild-type protein tetramer as the search model. A solution was obtained with a correlation coefficient of 0.682 (R-factor = 0.361) for data between 15 and 4 Å.

A subsequent data set was collected to a resolution of 2.0 Å., and this data set was used for refinement. Initial refinement was carried out using standard rigid-body, simulated-annealing, positional, and temperature factor refinement protocols in X-PLOR Version 3.1 (Brünger, *XPLOR Manual, Version 3.1*, Yale University Press, New Haven, CT (1992)) with the application of non-crystallographic symmetry (NCS) restraints. The progress of the refinement was monitored by the free R-factor (Brunger, *Nature*, Vol. 355, pp. 472-475 (1992)) using 5% of the reflections taken from thin resolution shells. The final stages of refinement were performed using SHELX-97 (Sheldrick et al., *Methods Enzymology*, Vol. 277, pp. 319-344 (1997)). All data from

25.0 to 2.0 Å were used, and a bulk solvent correction was applied. Local NCS restraints were applied throughout the refinement to residues 5-205 and 220-261 of each monomer. X-FIT (McRee, *Journal of Molecular Graphics*, Vol. 10, pp. 44-46 (1992)) was used for rebuilding and visual analysis of the structural model. Two-hundred eighty-two (282) water molecules were fit using the automatic water fitting procedures in SHELX while monitoring the effect on the free R factor. The final, refined model includes residues 5-261 of each of the four monomers in the asymmetric unit, with one NAD molecule bound to each monomer and an inhibitor molecule bound to three of the monomers. The final crystallographic R-factor was .215 (R_{free} = .265) for all unique data between 25.0 and 2.0 Å resolution. The RMS deviations from target stereochemistry (Engh et al., *Acta Crystallography*, Vol. A47, pp. 392-400 (1991)) were 0.005 Å for bond lengths and 1.5° for bond angles. All backbone dihedral angles fall in allowed regions of the Ramachandran plot except those for Ala 154, which occurs in a generously allowed region in all four monomers, and which forms a part of the nucleotide-binding pocket. Proline 224 participates in a *cis* peptide bond.

E. The ERAB or HADH2 Crystal Structure

Wild-type ERAB or HADH2 forms a tetramer in solution (He et al. (1998), *supra*). Likewise, a tetramer occupied the asymmetric unit of the crystal of the C214R mutant ERAB or HADH2. The conformations of the four subunits were essentially identical with the exception of a mobile loop near the substrate-binding site. Each ERAB or HADH2 monomer (Figure 1) formed a single domain with the overall polypeptide chain topology characteristic of the SDR family of enzymes (Jörnvall et al., *Biochemistry*, Vol. 34, pp. 6003-6013 (1995)). The entire polypeptide chain of each of the four monomers had clearly defined electron density with the exception of the first five residues of each monomer, which were apparently disordered. ERAB or HADH2 contained a "Rossman fold" dinucleotide-binding motif (Rossman et al., *The Enzymes*, Academic Press, NY, pp. 61-102 (1975)), comprising a core β-sheet of seven parallel strands sandwiched between two sets of three α-helices.

Certain important aspects of the chain fold in ERAB or HADH2 arose from two insertions in the wild-type ERAB or HADH2 sequence relative to other members of the SDR family (see Figure 2). These insertions formed structural elements that extended from opposite ends of each monomer (Figure 1B). The first insertion residues (102-107) formed a short β hairpin structure (βDE1, βDE2) that extended the enzyme surface on one side of the substrate-binding cleft. This insertion also extended a monomer-monomer interface in the tetramer by contacting helix αE2 of an adjacent subunit. A second insertion (residues 141-146) extended the

loop between αE2 and βE. This loop, which had extensive internal hydrogen bonding, did not lie near any active site region in the tetramer, but contacted Phe223 of an adjacent subunit and extends the subunit interface. Although the functional significance of these two structural elements of the protein is unknown, antibodies raised against peptides that encompass these insertion regions block the interaction of ERAB or HADH2 with β-amyloid (Yan et al. (1997), *supra*).

A ribbon representation of the ERAB or HADH2 tetramer is shown in Figure 3. The subunit interactions in the ERAB or HADH2 tetramer closely resembled those in the tetramers formed by certain other members of the SDR family, including 3α, 20β-hydroxysteroid dehydrogenase [Ghosh et al., *Proceedings of National Academy of Science, USA*, Vol. 88, pp. 10064-10068 (1991)] and 7α-hydroxysteroid dehydrogenase [Tanaka et al., *Biochemistry*, Vol. 35, pp. 7715-7730 (1996)]. The subunits in the tetramer were related by three mutually perpendicular two-fold axes, and each subunit contacted each of the other three subunits. The four active site regions were exposed on the outside of the tetramer, with a distance of about 31 Å between the reactive C4 atoms in the nicotinamide ring of each bound NAD^+ cofactor.

Electron density for the bound NAD^+ was clearly visible in all four subunits. Electron density for the inhibitor Compound I, however, was seen in only three of the four monomers in the asymmetric unit. The fourth monomer was involved in a crystal packing interaction that appeared to alter the conformation of the loop formed by residues 205 to 220, which formed one side of the substrate-binding cavity in the enzyme. The binding cleft was narrowed slightly in this monomer, which apparently precluded inhibitor binding. Therefore crystal formation and occupation of the fourth binding site by the inhibitor may be mutually exclusive.

Conversely, the corresponding region in other members of the SDR family has been observed to be mobile. In 7α-hydroxysteroid dehydrogenase, this region undergoes a large conformational change upon substrate binding (Tanaka et al. (1996) *supra*). The same region in *Drosophila* alcohol dehydrogenase is disordered in the enzyme-NAD^+ complex and assumes differing conformations in the presence of different bound inhibitors (Benach et al., *Journal of Molecular Biology*, Vol. 289, No. 2, pp. 335-55 (1999)). In the crystal structure of cis-biphenyl-2,3-dihydrodiol-2,3-dehydrogenase, this region is also observed to be disordered in the absence of substrate (Hülsmeyer et al., *Protein Science*, Vol. 7, pp. 1286-1293 (1998)). The flexibility of the substrate-binding flap may be important in allowing these enzymes to accommodate multiple substrates.

In the presence of inhibitor Compound I, the substrate-binding cavity formed a long, narrow cleft. One side of the cleft was composed of residues from two strands of the protein (residues 95-99 and 155-168). Residues 205-217, which formed part of the flexible substrate-binding flap, formed the other side of the cleft. Residue 214, which was mutated from Cys to Arg to facilitate crystallization, lay within this region but projected toward the exterior of the protein away from the substrate-binding cleft and was not in proximity to the bound inhibitor. The floor of the cleft was formed by the carboxy-terminus of the protein (residues 257-261). The substrate-binding cleft was largely hydrophobic in nature. A series of lysine residues (Lys 99, Lys 104, Lys 105) lay outside of the cleft at the site of the β-hairpin insertion region. These residues lay about 20 to 30 Å away from the reactive C4 atom of the NAD^+, which corresponded to the distance between the phosphates and the reactive carbonyl group in an extended acetoacetyl-CoA molecule. This insertion in ERAB or HADH2 may therefore contribute to the affinity of the enzyme for acetoacetyl-CoA as a substrate.

While the invention has been described in conjunction with examples and preferred embodiments thereof, it is to be understood that the foregoing description is exemplary and explanatory in nature, and is intended to illustrate the invention and its preferred embodiments. Thus, the invention is intended to be defined not by the above description, but by the following claims and their equivalents.